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Automotive News

October 9, 1989

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Pricing a major factor in '90 market battle

Toyota Celica, Lincoln Town Car and Chevrolet Lumina APV represent the different directions automakers will take as they try to build market share in a difficult 1990.

AUTOMOTIVE NEWS JOE WILSSENS

By Dutch Mandel
AUTOMOTIVE NEWS STAFF REPORTER

The automotive pricing game for 1990 is part of an intense struggle for market share in a down market that will include continued reliance on incentives.

The Big 3 face the hardest battle, having raised prices an average 4.7 percent, much of it to amortize legislated safety costs. Asian imports, helped by currency exchange rates, covered the cost of air bags and passive seat belts with a 2.7-percent increase, and some Europeans managed price reductions.

"Definitely, 1990 will be market-share driven," said Christopher Cedergren, senior market analyst for J.D. Power and Associates, Agoura Hills, Calif.

In 1990, all manufacturers must install passive restraints as standard equipment. For U.S. automakers, that can mean from $350 for the motorized belt system, as in Ford products, to as much as $1,000 for air bags. Chrysler intends to have air bags standard in all its U.S.-built cars.

The dollar's strength provides pricing advantages to foreign carmakers. "The dollar has picked up strength against major currencies, and it gives foreign companies margin to play with in their pricing," Cedergren said.

The exchange rate advantage has allowed German and Japanese automakers to include passive restraints without significant price increases.

Cedergren said that despite creditable efforts by Volkswagen to cut 1990 prices and eliminate rebates, it's likely other automakers will continue cash incentives in one form or another.

"I think everybody will continue with incentives," he said. "Incentives are almost like hard drugs: Once you get on, it's very hard to kick the habit."

He predicts the domestic, Japanese and European automakers will offer rebates. He said even European luxury makes will offer "more sophisticated incentive programs that don't diminish the nameplate," such as leasing programs and low-interest financing.

And those incentives will increase as inventories increase.

In 1990, transplants will come up to speed. They intend to build about 500,000 more vehicles in 1990 than in 1989, and the Japanese will likely maintain imports at 1989 quota levels. Meanwhile, J.D. Power anticipates new-car and truck sales in the 1990 calendar year will be total 14.4 million, down 300,000 from 1989.

The fight, said Cedergren, will be for market share. "The bottom line," he said, "is that this is a new era in selling cars."

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Intro '90 Extra
Special section features new products for the 1990 model year: domestic and import cars and light trucks.

Ford watchdogs will work with suppliers to cut costs

By Laura Clark
AUTOMOTIVE NEWS STAFF REPORTER

DEARBORN, Mich. — In its battle against rising material costs, Ford Motor Co. plans to set up a full-time cost reduction group in its North American automotive operations.

The group will work with suppliers to redesign and reformulate some of the components Ford buys.

The new program will be established by the end of the year. It is patterned after a similar program at Mazda Motor Corp. in Japan, called DRILL, or "drastic reduction innovation of all."

Spencer

The three-year-old Mazda program seeks a 30 percent reduction in material costs over a four-year period. Ford believes Mazda's target is "ambitious" and that a cut of that magnitude could frighten Ford suppliers.

The Ford action is "a drastic reduction program but it isn't a bludgeoning; we are looking to take costs out," said Alan Spencer, executive director of NAAO production purchasing. He said Ford has no specific cost reduction target as yet.

According to Ford, the program is not designed to cut suppliers' margins; it is simply an effort to help vendors reduce overall costs.

One Ford supplier, who spoke on the condition of anonymity, said the program is long overdue. He said Ford has not looked at costs as closely as its competitors.

In some cases, components may be redesigned or manufactured differently. The supplier may discover that the component can be made from different materials to reduce its cost.

Spencer admitted that redesigning or reformulating a part may cost the supplier extra time, but he claimed it will be beneficial in the long run because costs will be cut.

But one Ford supplier said that suppliers have suggested new ideas for components in the past but have been stymied by an enormous amount of red tape. Every new product, according to the source, must go through Ford's testing labs, but ideas often are killed before the lab sees them.

Spencer said Ford encourages its suppliers to work with their own vendors — or so-called "third-tier suppliers" — to reduce parts costs.

A key factor in deciding which parts can be redesigned or reformulated is the tear-down study, in which Ford and competitive vehicles are torn apart piece by piece. Each part is examined, weighed and measured. Ford estimates the cost of each part.

Ford is encouraging its suppliers to conduct their own tear-down studies to determine if changes can be made in the part they are producing for Ford.

Ford does not believe that every part on every vehicle can be redesigned to reduce cost. And it will take time to change parts that can be changed.

In some cases, Ford may have to wait until the next generation of a particular vehicle.

Ford has identified four areas that it believes are prime fields for cost reduction: wiring; bumpers, interior trim (seats and door trim) and instrument panels. A fifth may be powertrains, Spencer said.

Ford purchases its bumpers, interior trim and instrument panels from suppliers outside and inside the company. All wiring products are purchased from outside firms.

In addition to reducing costs, Ford continues to ask suppliers for a productivity improvement of 5 percent for each year of their contract with the automaker.

Supplier sources say Ford is putting more pressure on suppliers to sign the productivity pacts, but some suppliers with unique products (not available from any other source) have not signed the agreement.

Price increases for the products Ford purchases are based on productivity improvements minus inflation.

Audi 100 posts lowest injury score

By Diana T. Kuryiko
AUTOMOTIVE NEWS STAFF REPORTER

WASHINGTON — The Audi 100 has registered the lowest head injury score of any vehicle used in NHTSA's 35 mph crash program.

The air-bag equipped luxury sedan had a driver head injury score of 185. That compares with scores ranging from 541 to 1,421 on eight other mid-sized and full-sized 1989 cars crashed by NHTSA — two of which also had air bags. The Audi's passenger head injury score, 710, was comparable to other cars crashed.

One of Audi's harshest critics, Clarence Ditlow, director of the Center for Auto Safety, praised the car's performance.

"It shows what we've been saying all along — that when you add an air bag into a car with good energy-absorbing structure, you'll get good scores," he said. "Other manufacturers should follow" Audi.

Federal rules that took effect last month require all 1990 model cars sold in the United States to carry either a driver's side air bag or automatic seat belts. Through 1989, few air bag-equipped cars have gone through NHTSA's program. For the 1990 model year, about 75 U.S. and import models have a standard driver's side air bag.

NHTSA crashed 35 vehicles during the 1989 model year in its experimental New Car Assessment Program. A two-door Dodge Daytona hatchback had the second-best head injury score, 399.

NHTSA 1989 NEW- CAR CRASH ASSESSMENT

Vehicle	Head injury criterion Driver	Head injury criterion Passenger	Chest deceleration (G's) Driver	Chest deceleration (G's) Passenger
SUBCOMPACT CARS:				
Geo Metro 4-dr. sedan	1,075	840	56	46
Geo Metro 2-dr. sedan	951	1,177	ND	33
Nissan 240SX 2-dr. hatchback	407	525	41	44
COMPACT CARS:				
Nissan Maxima 4-dr. sedan*	808	736	51	44
LARGE AND MID-SIZED CARS:				
Audi 100 4-dr. sedan*	185	710	35	31
TRUCKS, VANS, MPVs:				
Nissan pickup	742	965	46	35

ND—No data
*Equipped with automatic crash protection system as standard equipment

The Audi 100's predecessor, the Audi 5000, had a driver head injury score of 2,105 and a passenger score of 557 when it was crashed during the 1985 model year. It did not have an air bag.

Under NHTSA's program, cars are crashed into a fixed barrier at 35 mph. The impact is equivalent to a head-on collision between two identical cars traveling at 35 mph or a crash between a parked car and another moving at 70 mph.

The crash produces one-third more force than the 30 mph test used to certify all new cars sold in the United States. In that test, a head injury score of 1,000 or above and a G force of 60 or higher in the chest score is considered fatal to the vehicle's occupants.

The Audi 100 chest deceleration score was 35 G's for the driver and 31 G's for the passenger, also record lows.

NHTSA engineers would not comment on the significance of the scores. NHTSA calls the crash program experimental because it only measures the force of a car during a frontal collision into a fixed object.

Ditlow has been a critic of Audi's 5000 model, which he said is prone to unintended acceleration. A NHTSA study, however, concluded that the phenomenon is caused by drivers mistaking the accelerator for the brake pedal.

AUTO ZEITUNG
The F-type Jaguar could be in production by summer 1992.

Jaguar F-type ahead of schedule

By Richard Johnson
AUTOMOTIVE NEWS STAFF REPORTER

FRANKFURT, West Germany — Despite doubts about financially troubled Jaguar's ability to bring out a successor to the legendary E-type, supplier sources in Europe confirm that the sports car project is not only alive but ahead of schedule.

Component orders indicate that the so-called F-type is much farther along than once believed and could be in production by the summer of 1992 — 18 months earlier than expected.

Jaguar reported an operating loss of £2.8 million ($4.5 million U.S.) in the first half of 1989 and some analysts question whether it has sufficient resources to put the car into production without the backing of a new owner.

Jaguar Chairman Sir John Egan has said he is committed to going ahead with new-model plans despite financial problems, though he has said there may be adjustments.

Plans for a long-wheelbase version of the XJ6 sedan were delayed earlier this year to give the sports car higher priority, according to sources familiar with the project.

The long-awaited 2+2 will give Jaguar three lines and will fill the gap left by the XKE that was discontinued in the 1970s. Annual production of 15,000 to 20,000 units is expected.

A front-mounted twin-turbo, six-cylinder engine putting out 350 horsepower is said to top the power offering, though the F-type is designed to accommodate a Jaguar V-12.

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Japanese transplants lead building boom in parts field

By Lindsay Chappell
AUTOMOTIVE NEWS STAFF REPORTER

A building boom led by Japanese transplant parts makers is still in full swing in the auto supplier industry despite worries about auto plant overcapacity in the 1990s.

Due primarily to new business from expanding Japanese automakers in the United States, as many as 50 new parts supplier plants have gone up in the past year. At least 20 more will be opened in the next two years.

Most of the expansion involves transplant parts makers and U.S.-Japanese joint ventures. According to one estimate, transplant suppliers will have opened more than 360 facilities by 1991, constituting one-tenth of all U.S. parts-making facilities.

But the question being asked throughout the industry is whether the transplant invasion is over.

The U.S. Automotive Parts Industry Office, a Tokyo trade office operated by the Motor and Equipment Manufacturers Association and the U.S. Commerce Department, estimates that 45 Japanese suppliers will open wholly owned plants or joint ventures this year, down from 68 in 1988. Earlier this year, Automotive Parts International, a Washington research firm, also reported that openings of new foreign-owned parts plants had slowed from an early 1988 peak.

AUTOMOTIVE NEWS/JOE WILKINS
Macosko sees a slowdown in supplier moves.

"The accepted estimate for the last few years was that there were about 300 Japanese parts companies that wanted to open U.S. production facilities," said Gregory Macosko, a partner with Easton Consultants of Hopkinton, Mass., who monitors transplants. "At this point, most of those that are going to come have now done so. We really don't see too many more suppliers coming over."

The growth of the transplant auto-assembly sector continues to be the stimulus for the supplier industry expansion now in progress among both U.S. and foreign companies.

Subaru-Isuzu Automotive recently opened its 120,000-vehicle-a-year plant in Lafayette, Ind. Nissan Motor Manufacturing is embarking on a $490 million project to produce an additional 220,000 cars a year in Smyrna, Tenn.

Diamond-Star Motors, which started production last year, is gearing up to build 240,000 Chrysler and Mitsubishi vehicles annually in Normal, Ill. Honda has also just opened its second U.S. car plant in East Liberty, Ohio, to produce another 150,000 cars a year. It is also expanding production at its Anna, Ohio, engine facility.

Toyota began building Camrys in Georgetown, Ky., last year and will soon start up a

see SUPPLIERS, page 28

OPINION

A tough compromise on clean air

Rep. John Dingell, D-Mich., discovered the limits on permissible automotive pollution last week. In the political climate of late 1989, those limits are outside the comfort zone of the Big 3 automakers.

Dingell, Detroit's powerful point man in Congress, made a historic compromise with Democratic Rep. Henry Waxman, California's anti-smog point man in Congress. At first glance, industry watchers might ask: "What compromise?"

Amendments to President Bush's proposed clean-air bill have consistently been defeats for the industry position. The automakers weren't keen about the Bush plan, but they said they could live with it.

Now, the Dingell-Waxman agreement calls for tighter tailpipe standards, 100,000-mile warranties on emissions systems, extension of car standards to light trucks and a requirement for canisters on cars to trap fuel vapors now lost at the pump. (Vapor traps ought to be on gas pumps, not cars, so the problem can be eliminated in months rather than decades.)

In the post-Reagan era, Dingell had to consent to all those things or risk finding himself an irrelevant voice outside the mainstream.

If the compromise has a bright side for the industry, it is that clean-air legislation is moving forward more surely. There is no technological barrier to meeting any of the proposed standards. The barriers are economic — several hundred dollars per car. But the one thing the industry needs is a clear set of standards and a clear, realistic timetable to meet them. And the Dingell-Waxman accord suggests that the legislative process will come up with clear standards in a few months and that the timetables will be realistic.

The automakers' biggest concern about the events last week centers on the 100,000-mile emissions-system guarantee, which doubles the current time frame. How many millions of dollars might go down the drain on a recall of cars with 80,000 miles on them?

Unfortunately, new cars have a way of becoming old cars. And old cars spew a disproportionate amount of pollution into the air. The industry itself has been blaming old cars for most air problems.

Automakers need to keep on slugging to be sure Congress cleans the air efficiently and doesn't merely penalize the industry and its customers. The fuel-vapor canister issue, for instance, smacks more of "getting" the auto industry than of trying to clean the air.

The Big 3 criticized last week's changes as expensive rules that will have only a tiny effect on air quality. But the automakers didn't go overboard: They didn't say it can't be done, and they didn't predict the end of prosperous free-market economies.

Like John Dingell, they have learned to compromise.

LETTERBOX

VW did it in the '70s

Your article covering Mercedes-Benz's intent to open a California design center in 1990 was most interesting. The statement that it will be the first-ever U.S. studio that will be opened by a European carmaker is incorrect.

Volkswagen of America had a completely facilitized design studio operating in America from late 1976 until 1984 or later.

The studio was staffed by U.S. designers, clay molders and stylists under the direction of Bill Maypole, a previous member of the General Motors design staff. Maypole reported to Duane Miller, VW's vice president of engineering.

This group made major contributions to the longevity of the U.S. Rabbit, Golf and Jetta, including design of one-piece headliners and new instrument panels with integral air conditioning.

Other achievements included the first U.S.-made GTI, development of square headlights on the Rabbit and Jetta models, interior panel design and color coordination and the complete design and styling of the first small pickup truck made in the United States by any manufacturer.

This group also contributed to the development and advanced planning of the first Audi 5000 vehicle.

Unfortunately, the studio was dissolved as a result of a management change in Germany in 1982 that changed VW's previous policy to manufacture where they sell in major world markets.

J.W. McLernon
Bloomfield Hills, Mich.

J.W. McLernon was president of Volkswagen of America from 1979 to 1982.

We invite letters from our readers. Unsigned letters will not be considered, but you may sign your name with the assurance that it will not be used if you so request. Address letters to: Letterbox, Automotive News, 1400 Woodbridge Ave., Detroit, MI 48207. Our fax number is (313) 446-0383.

Never over sticker

As a California automobile dealer with 11 franchises, I would like to applaud your Sept. 11 editorial suggesting that dealers should be happy when they can sell cars for sticker price and not gouge the public above that.

Our company has had a policy since 1984 that we never charge over manufacturer's suggested retail price plus a reasonable charge for accessories, if any. We also will make a car available without accessories if the customer wants it that way and never force accessories on the customer.

Among the franchises we hold are Mazda and Porsche, and this policy has definitely had a negative short-term effect on earnings with cars like the Mazda Miata and the Porsche Speedster.

It has been aggravating at times when we discover that customers have purchased cars at the window sticker price, only to act as brokers and resell the cars for a higher price within a matter of days or weeks.

It is time that we, as dealers, start taking a longer-term view of our business, our industry and our image.

Although our current "no over sticker" policy gives us a competitive advantage against virtually every dealer around us, I welcome other dealers to join us in this position and hope to improve the public's perception of our profession and our dealerships.

Obviously, we believe that in the long term, we will be better off for not having sold over sticker.

John B.T. Campbell III
President
Campbell Automotive Group
Irvine, Calif.

Customers don't forget

I am replying to the letter from Jon Shultz in your Oct. 2 Letterbox.

Concerning the issue of whether to gouge or not to gouge the public when you have a chance to make a home run by boosting stickers on hot merchandise:

I am no longer a General Motors dealer, but the dealership I recently sold was in the family for 50 years, and I am happy to say that we did not take advantage of our customers by jacking up the window-sticker price. Many times, you never find out if you gained or lost in the eventual shakeout. But here is our experience:

All through the years, I had a customer who could buy the most expensive auto on the market, but he stayed with us, buying one Buick Electra after another.

One day I broached the subject of why

see LETTERBOX, page 14

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The Audit Bureau ABP

Winnebago's new front-wheel-drive route van

Winnebago moves into commercial field

By Joseph Bohn
AUTOMOTIVE NEWS STAFF REPORTER

Limited opportunities in the RV market, stemming from its maturity and cyclical nature, are leading Winnebago Industries to diversify into commercial-vehicle products.

Winnebago of Forest City, Iowa, established a commercial vehicle division to field new products such as the front-wheel-drive route van it will introduce in November.

Richard B. Carlson, the division's vice president and general manager, said the company has also begun signing dealers.

Midway Ford Truck Center in Kansas City, Mo., and Liberty Ford in Philadelphia, were the first dealers to sign sales and service agreements to handle Winnebago's route vans.

Carlson said the goal is to sign one successful truck dealer in each of the top 100 major metropolitan areas during the next two years.

Most are expected to be light- and medium-duty dealers, since Winnebago's commercial vans will be positioned at the high end of Class 2 and in Class 3.

Carlson added that the firm will not exclude heavy-truck dealers from consideration, particularly those with a good fleet business.

Winnebago's goal for its new route van is to capture 10 percent of a 20,000-unit market that consists chiefly of bakery, snack food, parcel package delivery and industrial laundry delivery vehicles.

Winnebago has designed and will produce its own chassis and van bodies for its route vans. That puts it in competition with General Motors, Ford Motor Co. and Oshkosh Truck Corp. of Oshkosh, Wis., which are the primary chassis suppliers to vehicle manufacturers in that market.

Winnebago also will compete with commercial body manufacturers like Utilimaster Corp. of Wakarusa, Ind., and Grumman Olson of Sturgis, Mich., which produce vehicles on chassis supplied to them.

The design of the Winnebago route van is geared to easy entry and exit and spacious, flexible interior cargo capacity.

The fwd design of the new W-series vans enabled the company to give them an 18-inch floor height. Competitive models have floor heights of 31 to 35 inches.

Four versions of the van will be offered. One, the W950, has a high ceiling that enables the vehicle to carry 928 cubic feet of cargo, about 150 cubic feet more than standard vans built on Detroit chassis.

Other versions are the W650 with 664 cubic feet of cargo space, the W750 with 721 cubic feet of space and the W850 with 856 cubic feet of space.

The heights of those models range from 84 to 110 inches. Where cubic space is not critical, an operator can select a model with a lower height, which reduces frontal area and improves fuel economy.

Winnebago's chassis is built on a heavy-duty 50,000-pounds-per-square-inch rail frame. It features a Cummins turbocharged 105-horsepower 4BT diesel engine, Borg Warner T19 manual four-speed transmission, ZF front-drive axle and ZF transfer case.

The Cummins 120-hp 4BTA diesel and Ford 5.8-liter gas engines are options.

Carlson said the vehicles have not been priced.

The company is providing service backup for the vehicles through GE Capital Fleet Services of Eden Prairie, Minn.

GE's nationwide emergency breakdown service complements the network of sales and service dealerships Winnebago is setting up. Winnebago has four regional parts depots to supply dealers.

Non-van conversions help GMC set record

By Joseph Bohn
AUTOMOTIVE NEWS STAFF REPORTER

GMC Truck sold a record number of RV conversions during the 1989 model year, primarily because of increases in the number of Sierra pickups, Suburbans and Jimmys upfitted by its consignment pool accounts.

Increased conversions of those non-van products also helped four new companies make GMC's list of top 10 pool accounts, according to Keith Ball, GMC manager of special vehicle sales.

New to the top 10 are: Explorer Van Co. of Warsaw, Ind.; Van American of Goshen, Ind.; Trailmaster Vehicles of Fort Worth, Texas; and Chattanooga Custom Center of Chattanooga, Tenn.

Rounding out the top 10 are: Starcraft Corp. of Goshen, Ind.; Glaval (Autoform) of Elkhart, Ind.; Utilimaster/Holiday Rambler Corp. (Aviator) of Wakarusa, Ind.; Gulf Stream Coach (Monogram, Conquest) of Goshen; Bivouac Automotive and Bivouac Commercial of Vandalia, Mich.; and Sherrod Vans of Jacksonville, Fla. Sherrod's Victory Vans operation is in Fort Worth.

Even companies most traditionally linked to vans, such as Starcraft, are now heavily involved in converting Sierra pickups and Suburbans, Ball said.

GMC has been forced to seek its growth in those alternative vehicles because of a limited supply of van chassis.

"We had to turn down some people who wanted bailment because we didn't have enough product for them," Ball said.

He doesn't expect that to change in the short term. There are no extra van chassis on GMC's schedule for the 1990 model year.

"But as our sales rate does well, and others don't do as well, we'll receive more and more. You have to build toward getting more product," he added.

GMC reached a new model-year record for retail sales of upfitted vehicles in August, and every sale in September was that much over its objective, Ball said. He declined to provide specific numbers.

"We had to turn down some people who wanted bailment because we didn't have enough product for them."
KEITH BALL
GMC

Ball said he thought 1990 would "a flat year." He said he continually analyzes GMC's pool accounts because of their volatility.

The disappearance of companies that run into trouble forces the division to bring in new accounts.

"I analyze companies' performances continually and talk to people daily," Ball said. He watches the retail sales of converters' products to see how fast they sell on dealers' lots. That is the primary basis on which additional allocation is decided.

"It's a very equitable system. Those that move it, get it. The bailment companies are very happy with that. Obviously, they're very aggressive," Ball said.

To some extent, he also watches how much product converters sell to dealers at the wholesale level, "but that's just building up dealer inventory. It's just a stage in the sales process."

GMC has signed some strategic new accounts. Since beginning its focus on pickup and sport-utility conversions, it has looked at new accounts from a regional standpoint, considering such things as freight and shipping costs.

"You may already have a real good pickup outfitter, but a new one, even if he's not quite as good as the original one, may have an edge because of the freight factor. You can't ship vehicles across the country. The cost is much too prohibitive," Ball said.

On the other hand, he concluded, "You can't keep adding new converters in a region. You get to a point of diminishing returns. On pickups, we're locked into geographic considerations."

RV shipments to dealers dip 2% for month

By Joseph Bohn
AUTOMOTIVE NEWS STAFF REPORTER

RV wholesale shipments to dealers totaled 31,900 in July, down 2.45 percent from 32,700 a year earlier, according to the Recreation Vehicle Industry Association.

Van conversions are largely responsible for the industry's high seasonally adjusted annual selling rate of 394,0000 units.

They were the only vehicle category to increase during July and for the first seven months of calendar 1989.

Van conversion shipments totaled 16,500 in July, a new monthly record, up 2.48 percent from 16,100 a year earlier.

Their seven-month total of 123,800 was up 2.57 percent from 120,700 last year.

Van conversions accounted for nearly half the industry's total 249,300 shipments during the first seven months. That total was off 4.30 percent from 260,500 a year earlier.

Raw chassis shipped by Detroit van manufacturers to converters indicated a slowdown of conversion activity for August and September.

General Motors, Ford Motor Co. and Chrysler Motors shipped 9,400 seat-delete vans to converters in July, 38.98 percent fewer than the 15,400 shipped in the 1988 month.

For seven months, Detroit shipped 127,200 seatless vans to converters, 0.55 percent more than last year's 126,500.

In July, the slowdown in raw chassis shipments was slightly greater for full-sized vans than for compact models.

During July, Detroit manufacturers shipped 7,200 full-sized vans to converters, 38.98 percent fewer than last year's 11,800.

It also shipped 2,200 compact chassis, 38.89 percent fewer than the year-ago month's 3,600.

Detroit shipped 98,500 full-sized chassis to converters during the seven-month period, up 1.23 percent from 97,300 a year earlier.

During the same period, it shipped 28,700 compact vans, off 1.71 percent from 29,200 a year earlier.

Recreational Vehicle Wholesale Deliveries

	July 1989	July 1988	% change	7 mon. 1989	7 mon. 1988	% change
Travel trailers	4,600	4,800	– 4.2	36,000	39,400	– 8.6
Park Trailers	500	500	+ 0.0	4,500	4,300	+ 4.7
Travel trailers—fifth wheel	2,100	2,200	– 4.5	18,100	19,300	– 6.2
Folding camping trailers	2,600	2,800	– 7.1	20,200	25,900	–22.0
Truck campers	900	900	+ 0.0	6,600	7,100	– 7.0
Towable RV total	10,700	11,200	– 4.5	85,400	96,000	–11.4
Conventional (type A)	3,100	3,100	+ 0.0	22,600	24,500	– 7.8
Van Campers (type B)	300	400	–25.0	3,200	3,200	+ 0.0
Chopped vans (all)	1,300	1,900	–31.6	14,300	16,100	–11.2
Motor home total	4,700	5,400	–13.0	40,100	43,800	– 8.4
Van conversions	16,500	16,100	+ 2.5	123,800	120,700	+ 2.6
TOTAL ALL RVs	31,900	32,700	– 2.4	249,300	260,500	– 4.3

Source: Recreation Vehicle Industry Association

RVIA re-elects five directors; technician training scheduled

RESTON, Va. — The Recreation Vehicle Industry Association re-elected five members of its 21-member board of directors to a second term that began Oct. 1.

The board members re-elected are: Allen Yoder Jr., president of Jayco Inc. in Middlebury, Ind., chairman; Melvin Adams, president of Coleman Co.'s RV Group in Wichita, Kan., vice chairman; H. Wayne Dahl, president and chief operating officer of Holiday Rambler Corp. in Wakarusa, Ind., second vice president; John Casey Jr., president of Shurflo in Santa Ana, Calif., secretary; and Stepen Decker, president of Skamper Corp. in Bristol, Ind., treasurer.

The directors will serve one-year terms. They, along with Don Cuzzocrea, president of Starcraft Corp. in Goshen, Ind.; RVIA President David J. Humphreys; and RVIA General Counsel Jerome C. Loftus, make up the association's executive committee for 1990.

RVIA said it plans to establish the National Recreation Vehicle Technical Institute next year.

The purpose of the nationwide program of education and training is to attract more and better-qualified service technicians to the industry.

The institute will offer a network of standardized, competency-based training courses for RV service technicians in community colleges and technical institutes.

Scheduled to begin in September 1990, the program is designed to help offset a widely predicted labor shortage that may reduce the number of qualified RV service technicians in the next decade.

The institute's first preparatory training courses will be offered in central Florida; Elkhart, Ind.; and Southern California.

SPECIFICATIONS

1990 EPA mileage specs

Car Line	Est MPG City	Hwy	Displ (liters)	Trans	Fuel Sys
Two Seaters					
Alfa Romeo Spider	23	30	2.0	M5	FI
Buick Reatta	18	27	3.8	L4	FI
Cadillac Allante	15	22	4.5	L4	FI
Chevrolet Corvette	16	25	5.7	M6	FI
Chevrolet Corvette	16	24	5.7	L4	FI
Chevrolet Corvette	16	25	5.7	M6	FI
Chrysler TC by Maserati	18	25	2.2	M5	FI
Chrysler TC by Maserati	17	24	3.0	L4	FI
Nissan 300ZX	19	24	3.0	L4	FI
Nissan 300ZX Turbo	18	24	3.0	L4	FI
Nissan 300ZX Turbo x	18	24	3.0	M5	FI
Nissan 300ZX	18	24	3.0	M5	FI
Ferrari Testarossa	10	15	4.9	M5	FI
Honda Civic CRX	29	35	1.5	L4	FI
Honda Civic CRX	32	35	1.5 *	M5	FI
Honda Civic CRX	28	33	1.6	M5	FI
Honda Civic CRX HF	49	52	1.5	M5	FI
Honda Civic CRX HF	43	49	1.5	M5	FI
Lamborghini Countach	6	10	5.2	M5	FI
Lotus Esprit Turbo	17	27	2.2	M5	FI
Maserati Karif Turbo	15	18	2.8	L4	FI
Maserati Karif Turbo	15	20	2.8	M5	FI
Maserati Spyder Turbo	15	18	2.8	L4	FI
Maserati Spyder Turbo	15	20	2.8	M5	FI
Mazda RX-7	17	23	1.3	L4	FI
Mazda RX-7 Turbo	16	24	1.3	M5	FI
Mazda RX-7	17	25	1.3	M5	FI
Mazda MX-5 Miata	25	30	1.6	M5	FI
Minicompact Cars					
Nissan 240SX	20	25	2.4	L4	FI
Nissan 240SX	20	27	2.4	M5	FI
Maserati 222E Turbo	15	18	2.8	L4	FI
Maserati 222E Turbo	15	20	2.8	M5	FI
Porsche 911 Carrera	16	24	3.6	M5	FI
Porsche 911 Carrera 4wd	15	22	3.6	M5	FI
Porsche 928 S4	15	19	5.0	A4	FI
Porsche 928 S4	13	19	5.0	M5	FI
Porsche 944 S2	17	26	3.0	M5	FI
Volkswagen Cabriolet	23	28	1.8	A3	FI
Volkswagen Cabriolet	25	32	1.8	M5	FI
Subcompact Cars					
Acura Integra	23	27	1.8	L4	FI
Acura Integra	24	28	1.8	M5	FI
Audi Coupe Quattro	18	24	2.3	M5	FI
Audi 80	23	27	2.0	A3	FI
Audi 80	22	30	2.0	M5	FI
Audi 80 Quattro	18	24	2.3	M5	FI
Audi 90	19	22	2.3	A3	FI
Audi 90	20	26	2.3	M5	FI
Audi 90 Quattro 20V	18	24	2.3	M5	FI
BMW M3	17	29	2.3	M5	FI
BMW 325i Convertible	18	23	2.5	L4	FI
BMW 325i Convertible	18	25	2.5	M5	FI
BMW 325i/325is	18	22	2.5	L4	FI
BMW 325i/325is	18	23	2.5	M5	FI
BMW 325ix	19	22	2.5	L4	FI
BMW 325ix	17	23	2.5	M5	FI
Chevrolet Camaro	18	27	3.1	L4	FI
Chevrolet Camaro	17	26	5.0	L4	FI
Chevrolet Camaro	17	24	5.0	L4	FI
Chevrolet Camaro	16	26	5.0	M5	FI
Chevrolet Camaro	17	25	5.0	M5	FI
Chevrolet Camaro	16	24	5.7	L4	FI
Chevrolet Sprint	38	39	1.0	A3	FI
Chevrolet Sprint	46	50	1.0	M5	FI
Chevrolet Turbo Sprint	37	42	1.0	M5	FI
Chrysler LeBaron Convertible Turbo	20	28	2.2	M5	FI
Chrysler LeBaron Convertible Turbo	19	23	2.5	A3	FI
Chrysler LeBaron Convertible	22	27	2.5	L3	FI
Chrysler LeBaron Convertible	19	27	3.0	M5	FI
Daihatsu Charade	38	42	1.0	M5	FI
Daihatsu Charade	31	34	1.3	A3	FI
Daihatsu Charade	35	39	1.3	M5	FI
Nissan Pulsar NX	25	31	1.6	L3	FI
Nissan Pulsar NX	26	34	1.6	M5	FI
Nissan Pulsar NX	21	30	1.8	L4	FI
Nissan Pulsar NX	23	30	1.8	M5	FI
Nissan Sentra	26	31	1.6	L3	FI
Nissan Sentra	29	36	1.6	M4	FI
Nissan Sentra	28	36	1.6	M5	FI
Nissan Sentra Coupe	26	30	1.6	L3	FI
Nissan Sentra Coupe	28	36	1.6	M5	FI
Nissan 300ZX 2 + 2	19	24	3.0	L4	FI
Nissan 300ZX 2 + 2	18	24	3.0	M5	FI
Dodge Colt	27	29	1.5	L3	FI
Dodge Colt	31	36	1.5	M4	FI
Dodge Colt	29	34	1.5	M5	FI
Dodge Colt	23	28	1.6	L4	FI
Dodge Colt	23	28	1.6	M5	FI
Dodge Daytona Turbo	20	28	2.2	M5	FI
Dodge Daytona Turbo	19	23	2.5	A3	FI
Dodge Daytona	22	27	2.5	L3	FI
Dodge Daytona Turbo	20	29	2.5	M5	FI
Dodge Daytona	24	32	2.5	M5	FI
Dodge Daytona	19	27	3.0	M5	FI
Dodge Omni	25	30	2.2	L3	FI
Dodge Omni	25	34	2.2	M5	FI
Eagle Talon	22	27	2.0	L4	FI
Eagle Talon Turbo 4wd	20	25	2.0	M5	FI
Eagle Talon Turbo	22	29	2.0	M5	FI
Eagle Talon	22	29	2.0	M5	FI
Ford Festiva	31	33	1.3	A3	FI
Ford Festiva	35	41	1.3	M5	FI
Ford Mustang	21	27	2.3	L4	FI
Ford Mustang	23	29	2.3	M5	FI
Ford Mustang	17	25	5.0	L4	FI
Ford Mustang	17	24	5.0	M5	FI
Geo Metro	37	40	1.0	A3	FI
Geo Metro	46	50	1.0	M5	FI
Geo Metro LSi	37	39	1.0	A3	FI
Geo Metro LSi	46	50	1.0	M5	FI
Geo Metro XFi	53	58	1.0	M5	FI
Geo Prizm	25	29	1.6	L3	FI
Geo Prizm	23	30	1.6	L4	FI
Geo Prizm	25	31	1.6	M5	FI
Geo Prizm	28	34	1.6	M5	FI
Geo Storm	25	31	1.6	A3	FI
Geo Storm	24	32	1.6	L4	FI
Geo Storm	31	36	1.6	M5	FI
Geo Storm	26	34	1.6	M5	FI
Honda Civic	28	33	1.5	L4	FI
Honda Civic	33	37	1.5	M4	FI
Honda Civic	31	34	1.5	M5	FI
Honda Civic	25	29	1.6	L4	FI
Honda Civic	28	32	1.6	M5	FI
Hyundai Excel	28	32	1.5	L4	FI
Hyundai Excel	29	33	1.5	M4	FI
Hyundai Excel	29	36	1.5	M5	FI
Hyundai Precis	28	32	1.5	L4	FI
Hyundai Precis	29	33	1.5	M4	FI
Hyundai Precis	29	36	1.5	M5	FI
Isuzu Impulse	24	32	1.6	L4	FI
Isuzu Impulse	26	34	1.6	M5	FI
Isuzu 4wd Turbo	22	28	1.6	M5	FI
Infiniti M30	19	25	3.0	L4	FI
Maserati 430 Turbo	15	18	2.8	L4	FI
Maserati 430 Turbo	15	20	2.8	M5	FI
Mitsubishi Eclipse	23	30	1.8	L4	FI
Mitsubishi Eclipse	23	32	1.8	M5	FI
Mitsubishi Eclipse 4wd	22	27	2.0	L4	FI
Mitsubishi Eclipse Turbo	20	25	2.0	M5	FI
Mitsubishi Eclipse Turbo	22	29	2.0	M5	FI
Mitsubishi Eclipse	22	29	2.0	M5	FI
Mitsubishi Mirage	27	29	1.5	L3	FI
Mitsubishi Mirage	31	36	1.5	M4	FI
Mitsubishi Mirage	28	34	1.5	M5	FI
Mitsubishi Mirage	23	28	1.6	L4	FI
Mitsubishi Mirage	23	28	1.6	M5	FI
Plymouth Colt	27	29	1.5	L3	FI
Plymouth Colt	31	36	1.5	M4	FI
Plymouth Colt	28	34	1.5	M5	FI
Plymouth Colt	23	28	1.6	L4	FI
Plymouth Colt	23	28	1.6	M5	FI
Plymouth Horizon	25	30	2.2	L3	FI
Plymouth Horizon	25	34	2.2	M5	FI
Plymouth Laser	23	30	1.8	L4*	FI
Plymouth Laser	23	32	1.8	M5	FI
Plymouth Laser	22	27	2.0	L4	FI
Plymouth Laser Turbo	22	29	2.0	M5	FI
Plymouth Laser	22	29	2.0	M5	FI
Pontiac Firebird Trans Am	18	27	3.1	L4	FI
Pontiac Firebird Trans Am	17	24	5.0	L4	FI
Pontiac Firebird Trans Am	17	26	5.0	L4	FI
Pontiac Firebird Trans Am	16	26	5.0	M5	FI
Pontiac Firebird Trans Am	17	25	5.0	M5	FI
Pontiac Firebird Trans Am	16	24	5.7	L4	FI
Pontiac Firefly	38	39	1.0	A3	FI
Pontiac Firefly	46	50	1.0	M5	FI
Pontiac Sunbird Convertible Turbo	21	28	2.0	L3	FI
Pontiac Sunbird Convertible	24	33	2.0	M5	FI
Pontiac Sunbird Convertible Turbo	21	30	2.0	M5	FI
Pontiac Firefly Turbo	37	42	1.0	M5	FI
Rolls-Royce Bentley Continental	10	13	6.8	A3	FI
Rolls-Royce Corniche III	10	13	6.8	A3	FI
Saab 900 Convertible Turbo	18	21	2.0	A3	FI
Saab 900 Convertible Turbo	21	28	2.0	M5	FI
Subaru Justy	33	37	1.2	M5	2bc
Subaru Justy	34	35	1.2	AV	FI
Subaru Justy	33	37	1.2	M5	FI
Subaru Justy 4wd	32	32	1.2	AV	FI
Subaru Justy 4wd	29	33	1.2	M5	FI
Subaru XT	23	29	1.8	L4	FI
Subaru XT	25	31	1.8	M5	FI
Subaru XT	20	28	2.7	L4	FI
Subaru XT 4wd	22	28	1.8	L4	FI
Subaru XT 4wd	24	29	1.8	M5	FI
Subaru XT 4wd	19	25	2.7	L4	FI
Subaru XT 4wd	18	25	2.7	M5	FI
Suzuki Swift	38	39	1.0	A3	FI
Suzuki Swift	46	50	1.0	M5	FI
Suzuki Swift	31	34	1.3	A3	FI
Suzuki Swift	38	39	1.3	M5	FI
Suzuki Swift	40	44	1.3	M5	FI
Suzuki Swift GT	25	28	1.3	A3	FI
Suzuki Swift GT	29	36	1.3	M5	FI
Toyota Celica	25	33	1.6	L4	FI
Toyota Celica	28	33	1.6	M5	FI
Toyota Celica Turbo	19	24	2.0	M5	FI
Toyota Celica	22	28	2.2	L4	FI
Toyota Celica	24	31	2.2	L4	FI
Toyota Celica	23	29	2.2	M5	FI
Toyota Corolla	26	29	1.6	L3	FI
Toyota Corolla 4wd	24	29	1.6	L4	FI
Toyota Corolla	25	33	1.6	L4	FI
Toyota Corolla	28	33	1.6	M5	FI
Toyota Corolla	25	31	1.6	M5	FI
Toyota Corolla	22	28	1.6	M5	FI
Toyota Supra	18	23	3.0	L4	FI
Toyota Supra Turbo	18	23	3.0	L4	FI
Toyota Supra	18	23	3.0	M5	FI
Toyota Supra Turbo	17	22	3.0	M5	FI
Toyota Tercel	29	32	1.5	L3	1bc
Toyota Tercel	31	36	1.5	M4	1bc
Toyota Tercel	30	36	1.5	M5	1bc
Toyota Tercel	27	31	1.5	L3	FI
Volkswagen Corrado	21	28	1.8	M5	FI
Volkswagen Fox	25	30	1.8	M4	FI
Volkswagen Fox	24	29	1.8	M5	FI
Compact Cars					
Acura Legend	18	22	2.7	L4	FI
Acura Legend	19	24	2.7	M5	FI
BMW 525i	18	23	2.5	L4	FI
BMW 525i	18	25	2.5	M5	FI
BMW 535i	15	21	3.4	L4	FI
BMW 535i	15	23	3.4	M5	FI
Buick Skylark	23	31	2.3	L3	FI
Buick Skylark	23	31	2.5	L3	FI
Buick Skylark	20	27	3.3	L3	FI
Chevrolet Beretta	24	31	2.2	L3	FI
Chevrolet Beretta	24	34	2.2	M5	FI
Chevrolet Beretta	22	31	2.3	M5	FI
Chevrolet Beretta	20	27	3.1	L3	FI
Chevrolet Beretta	19	28	3.1	M5	FI
Chevrolet Cavalier	25	33	2.2	L3	FI
Chevrolet Cavalier	25	36	2.2	M5	FI
Chevrolet Cavalier	20	27	3.1	L3	FI
Chevrolet Cavalier	19	28	3.1	M5	FI
Chrysler LeBaron Turbo	20	28	2.2	M5	FI
Chrysler LeBaron Turbo	19	23	2.5	A3	FI
Chrysler LeBaron	22	27	2.5	L3	FI
Chrysler LeBaron	19	28	3.0	M5	FI
Nissan Stanza	21	27	2.4	L4	FI
Nissan Stanza	22	29	2.4	M5	FI
Dodge Shadow	23	28	2.2	L3	FI
Dodge Shadow Turbo	20	28	2.2	M5	FI
Dodge Shadow	24	31	2.2	M5	FI
Dodge Shadow Turbo	20	23	2.5	A3	FI
Dodge Shadow	22	27	2.5	L3	FI
Dodge Shadow Turbo	21	29	2.5	M5	FI
Dodge Shadow	24	32	2.5	M5	FI
Eagle Summit	27	29	1.5	L3	FI
Eagle Summit	28	34	1.5	M5	FI
Eagle Summit	23	28	1.6	L4	FI
Eagle Summit	23	28	1.6	M5	FI
Ford Escort	27	31	1.9	A3	FI
Ford Escort	32	42	1.9	M4	FI
Ford Escort	27	36	1.9	M5	FI
Ford Escort	24	30	1.9	M5	FI
Ford Probe Turbo	19	25	2.2	L4	FI
Ford Probe	21	28	2.2	L4	FI
Ford Probe Turbo	21	27	2.2	M5	FI
Ford Probe	24	30	2.2	M5	FI
Ford Probe	19	26	3.0	L4	FI
Ford Probe	19	26	3.0	M5	FI
Ford Tempo	22	26	2.3	A3	FI
Ford Tempo 4wd	19	23	2.3	A3	FI
Ford Tempo	23	33	2.3	M5	FI
Ford Tempo	21	28	2.3	M5	FI
Honda Accord	22	28	2.2	L4	FI
Honda Accord	24	30	2.2	M5	FI
Isuzu Stylus	27	32	1.6	A3	FI
Isuzu Stylus	32	37	1.6	M5	FI
Isuzu Stylus	25	33	1.6	M5	FI
Jaguar	17	22	4.0	L4	FI
Lexus ES250	19	25	2.5	L4	FI
Lexus ES250	19	26	2.5	M5	FI
Mercury Topaz 4wd	19	23	2.3	A3	FI
Mercury Topaz	22	26	2.3	A3	FI
Mercury Topaz	23	33	2.3	M5	FI
Mercury Topaz	21	28	2.3	M5	FI
Mazda 323/323 Protege	26	33	1.6	L4	FI
Mazda 323/323 Protege	29	37	1.6	M5	FI
Mazda 323/323 Protege	23	29	1.8	L4	FI
Mazda 323/323 Protege	24	31	1.8	L4	FI
Mazda 323/323 Protege 4wd	21	26	1.8	L4	FI
Mazda 323/323 Protege	25	30	1.8	M5	FI
Mazda 323/323 Protege	28	36	1.8	M5	FI
Mazda 323/323 Protege 4wd	24	29	1.8	M5	FI
Mitsubishi Galant	22	27	2.0	L4	FI
Mitsubishi Galant	21	27	2.0	M5	FI
Mitsubishi Galant 4wd	20	23	2.0	M5	FI
Mitsubishi Galant	23	29	2.0	M5	FI
Mitsubishi Sigma	18	22	3.0	A4	FI
Oldsmobile Cutlass Calais	23	31	2.3	L3	FI
Oldsmobile Cutlass Calais	22	31	2.3	M5	FI
Oldsmobile Cutlass Calais	23	31	2.5	L3	FI
Oldsmobile Cutlass Calais	22	33	2.5	M5	FI
Oldsmobile Cutlass Calais	20	27	3.3	L3	FI
Peugeot 405	20	25	1.9	L4	FI
Peugeot 405 16V	20	28	1.9	M5	FI
Peugeot 405	20	27	1.9	M5	FI
Plymouth Sundance	23	28	2.2	L3	FI
Plymouth Sundance	24	31	2.2	M5	FI
Plymouth Sundance Turbo	20	23	2.5	A3	FI
Plymouth Sundance	22	27	2.5	L3	FI
Plymouth Sundance	24	32	2.5	M5	FI
Plymouth Sundance Turbo	21	29	2.5	M5	FI
Pontiac Grand Am	23	31	2.3	L3	FI
Pontiac Grand Am	22	31	2.3	M5	FI
Pontiac Grand Am	23	31	2.5	L3	FI
Pontiac Grand Am	22	33	2.5	M5	FI
Pontiac LeMans	27	33	1.6	L3	FI
Pontiac LeMans	29	38	1.6	M4	FI
Pontiac LeMans	31	40	1.6	M5	FI
Pontiac LeMans	23	30	2.0	L3	FI
Pontiac LeMans	25	31	2.0	M5	FI
Pontiac Sunbird Turbo	21	28	2.0	L3	FI
Pontiac Sunbird	24	32	2.0	L3	FI
Pontiac Sunbird	26	36	2.0	M5	FI
Pontiac Sunbird Turbo	21	30	2.0	M5	FI
Saab 900 Turbo	19	23	2.0	A3	FI
Saab 900	19	22	2.0	A3	FI
Saab 900	22	28	2.0	M5	FI
Saab 900 Turbo	21	28	2.0	M5	FI
Saab 900 Turbo	22	29	2.0	M5	FI
Subaru Legacy	21	28	2.2	L4	FI
Subaru Legacy	23	30	2.2	M5	FI
Subaru Legacy 4wd	20	26	2.2	L4	FI
Subaru Legacy 4wd	21	27	2.2	M5	FI
Subaru Loyale Turbo	22	24	1.8	A3	FI
Subaru Loyale	24	26	1.8	L3	FI
Subaru Loyale	25	32	1.8	M5	FI
Subaru Loyale 4wd Turbo	20	26	1.8	L4	FI
Toyota Camry	21	24	2.0	L4	FI
Toyota Camry	25	31	2.0	L4	FI
Toyota Camry	24	31	2.0	L4	FI
Toyota Camry	22	27	2.0	M5	FI
Toyota Camry	26	34	2.0	M5	FI
Toyota Camry	19	25	2.5	L4	FI
Toyota Camry	19	26	2.5	M5	FI
Toyota Cressida	19	24	3.0	L4	FI
Volkswagen Golf/GTI	23	28	1.8	A3	FI
Volkswagen Golf/GTI	25	32	1.8	M5	FI
Volkswagen GTI 16V	22	28	2.0	M5	FI
Volkswagen Jetta Diesel	37	43	1.6	M5	FI
Volkswagen Jetta	23	28	1.9	A3	FI
Volkswagen Jetta	25	32	1.8	M5	FI
Volkswagen GLI 16V	22	28	2.0	M5	FI
Volvo 240	20	25	2.3	A4	FI
Volvo 240	21	28	2.3	M5	FI
Volvo 780 Turbo	18	21	2.3	A4	FI
Volvo 780	17	21	2.8	A4	FI
Mid-Size Cars					
ASC Grand Prix Turbo	17	25	3.1	L4	FI
Audi V8	14	18	3.6	L4	FI
Audi 100	18	22	2.3	A3	FI
Audi 100	18	23	2.3	L4	FI
Audi 100 Quattro	18	24	2.3	M5	FI
Audi 200 Turbo	18	22	2.2	A3	FI
Audi 200 Quattro Turbo	17	25	2.2	M5	FI
Bentley Eight/Mulsanne	10	13	6.8	A3	FI
BMW 735i	15	21	3.4	L4	FI
BMW 735i	15	23	3.4	M5	FI
BMW 735i	15	21	3.4	L4	FI
BMW 750iL	12	18	5.0	L4	FI
Buick Century	23	31	2.5	L3	FI
Buick Century	20	27	3.3	L3	FI
Buick Century	20	29	3.3	L4	FI
Buick Regal	19	30	3.1	L4	FI
Buick Riviera	18	27	3.8	L4	FI
Cadillac Eldorado	16	25	4.5	L4	FI
Cadillac Seville	16	25	4.5	L4	FI
Chevrolet Corsica	24	31	2.2	L3	FI
Chevrolet Corsica	24	34	2.2	M5	FI
Chevrolet Corsica	20	27	3.1	L3	FI
Chevrolet Corsica	19	28	3.1	M5	FI
Chevrolet Lumina	21	27	2.5	L3	FI
Chevrolet Lumina	19	27	3.1	L3	FI
Chevrolet Lumina	19	30	3.1	L4	FI
Chrysler New Yorker	19	26	3.3	L4	FI
Nissan Maxima	19	26	3.0	L4	FI
Nissan Maxima	20	26	3.0	M5	FI
Dodge Dynasty	22	27	2.5	L3	FI
Dodge Dynasty	19	26	3.3	L4	FI
Dodge Spirit Turbo	19	23	2.5	A3	FI
Dodge Spirit	22	27	2.5	L3	FI
Dodge Spirit Turbo	21	29	2.5	M5	FI
Dodge Spirit	24	32	2.5	M5	FI
Ford Taurus	20	26	2.5	A3	FI
Ford Taurus	20	29	3.0	L4	FI
Ford Taurus	18	27	3.0	M5	FI
Ford Taurus	19	28	3.8	L4	FI
Ford Thunderbird	17	23	3.8	L4	FI
Ford Thunderbird	19	27	3.8	L4	FI
Ford Thunderbird	17	24	3.8	M5	FI
Hyundai Sonata	21	26	2.4	L4	FI
Hyundai Sonata	21	28	2.4	M5	FI
Hyundai Sonata	18	24	3.0	A4	FI
Infiniti Q45	16	22	4.5	L4	FI
Lexus LS400	18	23	4.0	L4	FI
Lincoln Mark VII	17	24	5.0	L4	FI
Mercury Cougar	17	23	3.8	L4	FI
Mercury Cougar	19	27	3.8	L4	FI
Mercury Cougar	17	24	3.8	M5	FI
Mercury Sable	20	29	3.0	L4	FI
Mercury Sable	19	28	3.8	L4	FI
Maserati 228 Turbo	15	18	2.8	L4	FI
Maserati 228 Turbo	14	19	2.8	M5	FI
Mazda 626/MX-6	22	28	2.2	L4	FI
Mazda 626/MX-6 Turbo	19	25	2.2	L4	FI
Mazda 626/MX-6 Turbo	21	28	2.2	M5	FI
Mazda 626/MX-6	24	31	2.2	M5	FI
Mazda 929	19	23	3.0	L4	FI
Mazda 929	18	22	3.0	L4	FI
Oldsmobile Cutlass Ciera	23	31	2.5	L3	FI
Oldsmobile Cutlass Ciera	20	27	3.3	L3	FI
Oldsmobile Cutlass Ciera	20	29	3.3	L4	FI
Oldsmobile Cutlass Supreme	22	29	2.3	L3	FI
Oldsmobile Cutlass Supreme	19	30	3.1	L4	FI
Oldsmobile Trofeo/Toronado	18	27	3.8	L4	FI
Plymouth Acclaim	22	27	2.5	L3	FI
Plymouth Acclaim Turbo	21	29	2.5	M5	FI
Plymouth Acclaim	24	32	2.5	M5	FI
Pontiac Grand Prix	22	29	2.3	L3	FI
Pontiac Grand Prix	19	30	3.1	L4	FI
Pontiac 6000	23	31	2.5	L3	FI
Pontiac 6000	20	27	3.1	L3	FI
Pontiac 6000 4wd	17	23	3.1	L3	FI
Pontiac 6000	19	30	3.1	L4	FI
Rolls-Royce Silver Spirit II	10	13	6.8	A3	FI
Volkswagen Passat	20	29	2.0	L4	FI
Volkswagen Passat	21	30	2.0	M5	FI
Volvo 740 Turbo	18	21	2.3	A4	FI
Volvo 740	20	26	2.3	L4	FI
Volvo 740 Turbo	20	25	2.3	M4	FI
Volvo 740	21	28	2.3	M5	FI
Volvo 740 16V	18	24	2.3	L4	FI
Volvo 740 16V	18	26	2.3	M4	FI
Volvo 760 Turbo	18	21	2.3	A4	FI
Volvo 760	17	21	2.8	A4	FI

1990 EPA FUEL-ECONOMY ESTIMATES

10 BEST CARS

Model	Engine	Transmission	MPG City	MPG Highway
Geo Metro XFI	1-L I-3	M5	53	58
Honda Civic CRX HF	1.5-L I-4	M5*	49	52
Geo Metro	1-L I-3	M5	46	50
Geo Metro LSI	1-L I-3	M5	46	50
Suzuki Swift	1-L I-3	M5	46	50
Honda Civic CRX HF	1.5-L I-4	M5*	43	49
Suzuki Swift	1.3-L I-4	M5	40	44
Daihatsu Charade	1-L I-3	M5	38	42
Suzuki Swift	1-L I-3	A3	38	39
Volkswagen Jetta	1.6-L I-4**	M5	37	43

10 WORST CARS

Lamborghini Countach	5.2-L V-12	M5	6	10
Bentley Continental	6.8-L V-8	A3	10	13
Rolls-Royce Corniche III	6.8-L V-8	A3	10	13
Rolls-Royce Silver Spirit/Spur	6.8-L V-8	A3	10	13
Bentley Eight Mulsanne	6.8-L V-8	A3	10	13
Ferrari Testarossa	4.9-L V-12	M5	10	15
BMW 750iL	5-L V-12	L4	12	18
Porsche 928-S4	5-L V-8	M5	13	19
Audi V8	3.6-L V-8	L4	14	18
Maserati 228	2.8-L V-6	M5	14	19

M5 5-speed manual transmission
A3 3-speed automatic transmission
L4 4-speed automatic transmission with lock-up torque converter
* The higher fuel-economy version is equipped with a shift indicator light which alerts the driver to the most economical shift points
**diesel

SPECIFICATIONS

Car Line	Est MPG City	Est MPG Hwy	Displ (liters)	Trans	Fuel Sys
Large Cars					
Buick Electra/Park Avenue	18	27	3.8	L4	FI
Buick LeSabre	18	27	3.8	L4	FI
Cadillac Brougham	17	24	5.0	L4	4bc
Cadillac Brougham	14	21	5.7	L4	FI
Cadillac Fleetwood/DeVille	16	25	4.5	L4	FI
Chevrolet Caprice	19	27	4.3	L4	FI
Chevrolet Caprice	16	25	5.0	L4	FI
Chevrolet Caprice (Police)	14	20	5.7	L4	FI
Chrysler New Yorker Fifth Avenue	18	25	3.3	L4	FI
Dodge Monaco	17	26	3.0	L4	FI
Eagle Premier	17	26	3.0	L4	FI
Ford LTD Crown Victoria	17	24	5.0	L4	FI
Ford LTD Crown Victoria (Police)	13	19	5.8	L4	2bc
Lincoln Continental	18	25	3.8	L4	FI
Lincoln Town Car	17	24	5.0	L4	FI
Mercury Grand Marquis	17	24	5.0	L4	FI
Oldsmobile Eighty-Eight	18	27	3.8	L4	FI
Oldsmobile Ninety-Eight/Touring	18	27	3.8	L4	FI
Pontiac Bonneville	18	27	3.8	L4	FI
Saab 9000	18	24	2.0	L4	FI
Saab 9000 Turbo	18	24	2.0	L4	FI
Saab 9000	21	28	2.0	M5	FI
Saab 9000 Turbo	20	26	2.0	M5	FI
Small Station Wagons					
Chevrolet Cavalier Wagon	24	31	2.2	L3	FI
Chevrolet Cavalier Wagon	25	36	2.2	M5	FI
Chevrolet Cavalier Wagon	20	27	3.1	L3	FI
Chevrolet Cavalier Wagon	19	28	3.1	M5	FI
Nissan Sentra Wagon	26	30	1.6	L3	FI
Nissan Sentra Wagon	27	36	1.6	M5	FI
Dodge Colt Vista	22	23	2.0	L3	FI
Dodge Colt Vista	23	29	2.0	M5	FI
Dodge Colt Wagon	27	29	1.5	L3	FI
Dodge Colt Wagon	28	34	1.5	M5	FI
Ford Escort Wagon	26	31	1.9	A3	FI
Ford Escort Wagon	27	36	1.9	M5	FI
Honda Civic Wagon	28	32	1.5	L4	FI
Honda Civic Wagon	31	34	1.5	M5	FI
Honda Civic Wagon 4wd	24	26	1.6	L4	FI
Honda Civic Wagon 4wd	24	26	1.6	M5	FI
Mitsubishi Mirage Wagon	27	29	1.5	L3	FI
Mitsubishi Mirage Wagon	28	34	1.5	M5	FI
Mitsubishi Space Wagon	22	23	2.0	L3	FI
Plymouth Colt Vista	22	23	2.0	L3	FI
Plymouth Colt Vista	23	29	2.0	M5	FI
Plymouth Colt Wagon	27	29	1.5	L3	FI
Plymouth Colt Wagon	28	34	1.5	M5	FI
Subaru Legacy Wagon	21	28	2.2	L4	FI
Subaru Legacy Wagon	23	30	2.2	M5	FI
Subaru Legacy Wagon 4wd	20	25	2.2	L4	FI
Subaru Legacy Wagon 4wd	20	26	2.2	M5	FI
Subaru Loyale Wagon Turbo	22	24	1.8	A3	FI
Subaru Loyale Wagon	24	26	1.8	L3	FI
Subaru Loyale Wagon	25	30	1.8	M5	FI
Subaru Loyale Wagon 4wd Turbo	20	26	1.8	L4	FI
Toyota Camry Wagon	25	31	2.0	L4	FI
Toyota Camry Wagon	19	25	2.5	L4	FI
Toyota Corolla All-Trac Wagon	24	29	1.6	L4	FI
Toyota Corolla All-Trac Wagon	22	28	1.6	M5	FI
Toyota Corolla Wagon	26	29	1.6	L3	FI
Toyota Corolla Wagon	28	33	1.6	M5	FI
Volkswagen Fox Wagon	25	30	1.8	M4	FI
Mid-Size Station Wagons					
Audi Quattro Wagon Turbo	17	24	2.2	M5	FI
Buick Century Wagon	21	27	2.5	L3	FI
Buick Century Wagon	19	26	3.3	L3	FI
Buick Century Wagon	20	29	3.3	L4	FI
Chevrolet Celebrity Wagon	23	31	2.5	L3	FI
Chevrolet Celebrity Wagon	19	30	3.1	L4	FI
Ford Taurus Wagon	20	29	3.0	L4	FI
Ford Taurus Wagon	18	25	3.8	L4	FI
Ford Taurus Wagon V6 A/C	19	26	3.0	L4	FI
Mercury Sable Wagon	20	29	3.0	L4	FI
Mercury Sable Wagon	18	25	3.8	L4	FI
Mercury Sable Wagon V6 A/C	19	26	3.0	L4	FI
Oldsmobile Cutlass Cruiser	21	27	2.5	L3	FI
Oldsmobile Cutlass Cruiser	20	29	3.3	L4	FI
Peugeot 405 Wagon	20	24	1.9	L4	FI
Peugeot 405 Wagon	20	26	1.9	M5	FI
Peugeot 505 Wagon Turbo	18	21	2.2	L4	FI
Peugeot 505 Wagon	19	21	2.2	L4	FI
Peugeot 505 Wagon	18	22	2.2	M5	FI
Pontiac 6000 Wagon	21	27	2.5	L3	FI
Pontiac 6000 Wagon	19	30	3.1	L4	FI
Volkswagen Passat Wagon	20	29	2.0	L4	FI
Volvo 240 Wagon	19	24	2.3	A4	FI
Volvo 240 Wagon	21	27	2.3	M5	FI
Volvo Wagon Turbo	18	21	2.3	A4	FI
Volvo 740 Wagon	20	26	2.3	L4	FI
Volvo 740 Wagon Turbo	20	25	2.3	M4	FI
Volvo Wagon	21	28	2.3	M5	FI
Volvo 740 16V Wagon	18	26	2.3	M4	FI
Volvo 760 Wagon Turbo	18	21	2.3	A4	FI
Large Station Wagons					
Buick LeSabre/Electra Wagon	17	24	5.0	L4	4bc
Chevrolet Caprice Wagon	17	24	5.0	L4	4bc
Ford LTD Crown Victoria	17	24	5.0	L4	FI
Mercury Grand Marquis Wagon	17	24	5.0	L4	FI
Oldsmobile Custom Cruiser	17	24	5.0	L4	4bc
Small Pickup Trucks/2wd					
Chevrolet S10 Pickup	21	27	2.5	L4	FI
Chevrolet S10 Pickup	23	27	2.5	M5	FI
Chevrolet S10 Pickup	19	26	2.8	M5	FI
Chevrolet S10 Pickup	18	23	4.3	L4	FI
Chevrolet S10 Pickup	17	23	4.3	M5	FI
Nissan Hardbody	22	26	2.4	L4	FI
Nissan Hardbody	23	27	2.4	M5	FI
Nissan Hardbody	18	24	3.0	L4	FI
Nissan Hardbody	19	23	3.0	M5	FI
Dodge Ram 50	19	23	2.4	L4	FI
Dodge Ram 50	19	24	2.4	M5	FI
Ford Ranger Pickup	21	25	2.3	L4	FI
Ford Ranger Pickup	24	29	2.3	M5	FI
Ford Ranger Pickup	17	21	2.9	L4	FI
Ford Ranger Pickup	18	23	2.9	M5	FI
GMC S15 Pickup	21	27	2.5	L4	FI
GMC S15 Pickup	23	27	2.5	M5	FI
GMC S15 Pickup	19	26	2.8	M5	FI
GMC S15 Pickup	18	23	4.3	M5	FI
GMC S15 Pickup	17	23	4.3	M5	FI
Isuzu Pickup	22	24	2.3	M5	2bc
Isuzu Pickup	19	25	2.6	L3	FI
Isuzu Pickup	19	24	2.6	M5	FI
Mitsubishi Truck	19	23	2.4	L4	FI
Mitsubishi Truck	19	24	2.4	M5	FI
Small Pickup Trucks/4wd					
Ford Ranger Pickup	21	25	2.3	M5	FI
Ford Ranger Pickup	16	21	2.9	L4	FI
Ford Ranger Pickup	18	22	2.9	M5	FI
Standard Pickup Trucks/2wd					
Chevrolet C1500 Pickup	18	21	4.3	A3	FI
Chevrolet C1500 Pickup	17	22	4.3	L4	FI
Chevrolet C1500 Pickup	19	26	4.3	M4C	FI
Chevrolet C1500 Pickup	18	24	4.3	M5	FI
Chevrolet C1500 Pickup	15	16	5.0	A3	FI
Chevrolet C1500 Pickup	15	20	5.0	L4	FI
Chevrolet C1500 Pickup	15	20	5.0	M5	FI
Chevrolet C1500 Pickup	15	19	5.7	L4	FI
Chevrolet C1500 Pickup	12	14	5.7	M4C	FI
Chevrolet C1500 Pickup	13	18	5.7	M5	FI
Chevrolet C1500 Pickup Diesel	18	22	6.2	L4	FI
Chevrolet C1500 Pickup Diesel	19	21	6.2	M4C	FI
Chevrolet C1500 Pickup	10	11	7.4	A3	FI
Chevrolet C2500 Pickup	16	17	4.3	A3	FI
Chevrolet C2500 Pickup	16	21	4.3	L4	FI
Chevrolet C2500 Pickup	16	18	4.3	M4C	FI
Chevrolet C2500 Pickup	17	24	4.3	M5	FI
Chevrolet C2500 Pickup	14	15	5.0	A3	FI
Chevrolet C2500 Pickup	15	19	5.0	L4	FI
Chevrolet C2500 Pickup	15	19	5.0	M5	FI
Chevrolet C2500 Pickup	13	17	5.7	L4	FI
Chevrolet C2500 Pickup	12	14	5.7	M4C	FI
Chevrolet C2500 Pickup	13	18	5.7	M5	FI
Chevrolet C2500 Pickup Diesel	17	22	6.2	L4	FI
Chevrolet C2500 Pickup Diesel	18	20	6.2	M4C	FI
Dodge Dakota Pickup	21	28	2.5	M5	FI
Dodge Dakota Pickup	16	21	3.9	L4	FI
Dodge Dakota Pickup	16	22	3.9	M5	FI
Dodge D100/D150 Pickup	15	17	3.9	L3	FI
Dodge D100/D150 Pickup	16	21	3.9	L4	FI
Dodge D100/D150 Pickup	15	18	3.9	M4C	FI
Dodge D100/D150 Pickup	13	18	3.9	M5	FI
Dodge D100/D150 Pickup	13	16	5.2	A4	FI
Dodge D100/D150 Pickup	13	16	5.2	L3	FI
Dodge D100/D150 Pickup	13	17	5.2	L4	FI
Dodge D100/D150 Pickup	13	18	5.2	M4	FI
Dodge D100/D150 Pickup	13	16	5.2	M4C	FI
Dodge D100/D150 Pickup	12	14	5.9	A4	FI
Dodge D100/D150 Pickup	10	14	5.9	M4C	FI
Dodge D250 Pickup	15	17	3.9	L3	FI
Dodge D250 Pickup	14	17	3.9	M4C	FI
Dodge D250 Pickup	12	15	5.2	A4	FI
Dodge D250 Pickup	13	17	5.2	L4	FI
Dodge D250 Pickup	12	14	5.2	M4C	FI
Dodge D250 Pickup	11	13	5.9	A4	FI
Dodge D250 Pickup	10	14	5.9	M4C	FI
Jeep Comanche Pickup	18	24	2.5	L4	FI
Jeep Comanche Pickup	22	25	2.5	M4	FI
Jeep Comanche Pickup	20	25	2.5	M4	FI
Jeep Comanche Pickup	21	24	2.5	M5	FI
Jeep Comanche Pickup	19	24	2.5	M5	FI
Jeep Comanche Pickup	16	21	4.0	L4	FI
Jeep Comanche Pickup	17	23	4.0	M5	FI
Ford F150 Pickup	16	16	4.9	A3	FI
Ford F150 Pickup	15	20	4.9	L4	FI
Ford F150 Pickup	16	18	4.9	M4C	FI
Ford F150 Pickup	16	20	4.9	M5	FI
Ford F150 Pickup	13	15	5.0	A3	FI
Ford F150 Pickup	14	18	5.0	L4	FI
Ford F150 Pickup	14	15	5.0	M4C	FI
Ford F150 Pickup	14	18	5.0	M5	FI
Ford F150 Pickup	12	16	5.8	L4	FI
Fmd F250 Pickup	14	15	4.9	A3	FI
Ford F250 Pickup	15	19	4.9	L4	FI
Ford F250 Pickup	16	17	4.9	M4C	FI
Ford F250 Pickup	15	19	4.9	M5	FI
Ford F250 Pickup	15	19	4.9	M5C	FI
Ford F250 Pickup	14	18	5.0	L4	FI
Ford F250 Pickup	14	15	5.0	M4C	FI
Ford F250 Pickup	14	18	5.0	M5	FI
Ford F250 Pickup	11	15	5.8	L4	FI
GMC C1500 Sierra	18	21	4.3	A3	FI
GMC C1500 Sierra	17	22	4.3	L4	FI
GMC C1500 Sierra	18	20	4.3	M4C	FI
GMC C1500 Sierra	18	24	4.3	M5	FI
GMC C1500 Sierra	15	16	5.0	A3	FI
GMC C1500 Sierra	15	20	5.0	L4	FI
GMC C1500 Sierra	15	20	5.0	M5	FI
GMC C1500 Sierra	15	19	5.7	L4	FI
GMC C1500 Sierra	12	14	5.7	M4C	FI
GMC C1500 Sierra	13	18	5.7	M5	FI
GMC C1500 Sierra Diesel	18	23	6.2	L4	FI
GMC C1500 Sierra Diesel	19	21	6.2	M4C	FI
GMC C2500 Sierra	16	17	4.3	A3	FI
GMC C2500 Sierra	16	21	4.3	L4	FI
GMC C2500 Sierra	16	18	4.3	M4C	FI
GMC C2500 Sierra	17	24	4.3	M5	FI
GMC C2500 Sierra	14	15	5.0	A3	FI
GMC C2500 Sierra	15	19	5.0	L4	FI
GMC C2500 Sierra	15	19	5.0	M5	FI
GMC C2500 Sierra	13	17	5.7	L4	FI
GMC C2500 Sierra	12	14	5.7	M4C	FI
GMC C2500 Sierra	13	18	5.7	M5	FI
GMC C2500 Sierra Diesel	17	22	6.2	L4	FI
GMC C2500 Sierra Diesel	18	20	6.2	M4C	FI
Isuzu Pickup 1-Ton	18	22	2.6	M5	FI
Toyota Truck	21	23	2.4	M4	2bc
Toyota Truck	21	25	2.4	M5	2bc
Toyota Truck	23	24	2.4	A4	FI
Toyota Truck	23	26	2.4	M4	FI
Toyota Truck	22	26	2.4	M5	FI
Toyota Truck	18	24	3.0	L4	FI
Toyota Truck	19	24	3.0	M4	FI
Toyota Truck 1-Ton	18	24	3.0	L4	FI
Toyota Truck 1-Ton	19	24	3.0	M5	FI
Standard Pickup Trucks/4wd					
Chevrolet K1500 Pickup	16	17	4.3	A3	FI
Chevrolet K1500 Pickup	16	20	4.3	L4	FI
Chevrolet K1500 Pickup	15	17	4.3	M4C	FI
Chevrolet K1500 Pickup	16	20	4.3	M5	FI
Chevrolet K1500 Pickup	13	15	5.0	A3	FI
Chevrolet K1500 Pickup	14	18	5.0	L4	FI
Chevrolet K1500 Pickup	14	18	5.0	M5	FI
Chevrolet K1500 Pickup	13	17	5.7	L4	FI
Chevrolet K1500 Pickup	13	14	5.7	M4C	FI
Chevrolet K1500 Pickup	13	17	5.7	M5	FI
Chevrolet K1500 Pickup Diesel	16	21	6.2	L4	FI
Chevrolet K1500 Pickup Diesel	17	18	6.2	M4C	FI
Chevrolet K2500 Pickup	15	17	4.3	A3	FI
Chevrolet K2500 Pickup	16	20	4.3	L4	FI
Chevrolet K2500 Pickup	15	17	4.3	M4C	FI
Chevrolet K2500 Pickup	16	20	4.3	M5	FI
Chevrolet K2500 Pickup	13	14	5.0	A3	FI
Chevrolet K2500 Pickup	14	17	5.0	L4	FI
Chevrolet K2500 Pickup	14	18	5.0	M5	FI
Chevrolet K2500 Pickup	13	16	5.7	L4	FI
Chevrolet K2500 Pickup	13	14	5.7	M4C	FI
Chevrolet K2500 Pickup	12	16	5.7	M5	FI
Chevrolet K2500 Pickup Diesel	16	21	6.2	L4	FI
Chevrolet K2500 Pickup Diesel	17	18	6.2	M4C	FI
Chevrolet S10 Pickup	17	21	4.3	L4	FI
Chevrolet S10 Pickup	16	20	4.3	M5	FI
Nissan Hardbody	19	22	2.4	M5	FI
Nissan Hardbody	18	19	3.0	L4	FI
Nissan Hardbody	15	19	3.0	M5	FI
Dodge Dakota Pickup	15	20	3.9	L4	FI
Dodge Dakota Pickup	15	19	3.9	M5	FI
Dodge Power Ram 50	18	20	2.4	L4	FI
Dodge Power Ram 50	19	22	2.4	M5	FI
Dodge Power Ram 50	17	20	3.0	L4	FI
Dodge Power Ram 50	17	22	3.0	M5	FI
Dodge W100/W150 Pickup	14	15	3.9	A4	FI
Dodge W100/W150 Pickup	13	16	3.9	M4C	FI
Dodge W100/W150 Pickup	12	14	5.2	A4	FI
Dodge W100/W150 Pickup	12	15	5.2	M4C	FI
Dodge W100/W150 Pickup	11	13	5.9	A4	FI
Dodge W100/W150 Pickup	10	14	5.9	M4C	FI
Dodge W250 Pickup	11	14	5.2	A4	FI
Dodge W250 Pickup	12	15	5.2	M4C	FI
Dodge W250 Pickup	11	13	5.9	A4	FI
Dodge W250 Pickup	10	14	5.9	M4C	FI
Jeep Comanche Pickup	21	24	2.5	M4	FI
Jeep Comanche Pickup	20	24	2.5	M4	FI
Jeep Comanche Pickup	21	24	2.5	M5	FI
Jeep Comanche Pickup	19	24	2.5	M5	FI
Jeep Comanche Pickup	16	20	4.0	L4	FI
Jeep Comanche Pickup	17	22	4.0	M5	FI
Ford F150 Pickup	14	16	4.9	A3	FI
Ford F150 Pickup	14	18	4.9	L4	FI
Ford F150 Pickup	16	17	4.9	M4C	FI
Ford F150 Pickup	15	19	4.9	M5	FI
Ford F150 Pickup	13	13	5.0	A3	FI
Ford F150 Pickup	13	17	5.0	L4	FI
Ford F150 Pickup	13	15	5.0	M4C	FI
Ford F150 Pickup	13	16	5.0	M5	FI
Ford F150 Pickup	14	17	4.9	M5C	FI
Ford F250 Pickup	13	17	5.0	L4	FI
Ford F250 Pickup	12	14	5.0	M4C	FI
Ford F250 Pickup	13	16	5.0	M5	FI
Ford F250 Pickup	11	15	5.8	L4	FI
GMC K1500 Sierra	13	16	4.3	A3	FI
GMC K1500 Sierra	16	20	4.3	L4	FI
GMC K1500 Sierra	15	17	4.3	M4C	FI
GMC K1500 Sierra	16	20	4.3	M5	FI
GMC K1500 Sierra	13	15	5.0	A3	FI
GMC K1500 Sierra	14	18	5.0	L4	FI
GMC K1500 Sierra	14	18	5.0	M5	FI
GMC K1500 Sierra	13	17	5.7	L4	FI
GMC K1500 Sierra	13	14	5.7	M4C	FI
GMC K1500 Sierra	13	17	5.7	M5	FI
GMC K1500 Sierra	16	21	6.2	L4	FI
GMC K1500 Sierra	17	18	6.2	M4C	FI
GMC K2500 Sierra	15	17	4.3	A3	FI
GMC K2500 Sierra	16	20	4.3	L4	FI
GMC K2500 Sierra	15	17	4.3	M4C	FI
GMC K2500 Sierra	16	20	4.3	M5	FI
GMC K2500 Sierra	13	14	5.0	A3	FI
GMC K2500 Sierra	14	17	5.0	L4	FI
GMC K2500 Sierra	14	18	5.0	M5	FI
GMC K2500 Sierra	13	16	5.7	L4	FI
GMC K2500 Sierra	13	14	5.7	M4C	FI
GMC K2500 Sierra	12	16	5.7	M5	FI
GMC K2500 Sierra Diesel	16	21	6.2	L4	FI
GMC K2500 Sierra Diesel	17	18	6.2	M4C	FI
GMC S15 Pickup	17	21	4.3	L4	FI
GMC S15 Pickup	16	20	4.3	M5	FI
Isuzu Pickup	16	19	2.6	M5	FI
Mitsubishi Truck	18	20	2.4	L4	FI
Mitsubishi Truck	19	22	2.4	M5	FI
Mitsubishi Truck	17	22	3.0	M5	FI
Suzuki Samurai Hardtop	28	29	1.3	M5	FI
Suzuki Samurai Soft-Top	28	29	1.3	M5	FI
Suzuki Sidekick Hardtop	24	25	1.6	L3	FI
Suzuki Sidekick Hardtop	26	28	1.6	M5	FI
Suzuki Sidekick Soft-Top	24	25	1.6	L3	FI
Suzuki Sidekick Soft-Top	26	28	1.6	M5	FI
Toyota Land Cruiser Wagon	12	14	4.0	L4	FI
Toyota 4-Runner	17	19	2.4	L4	FI
Toyota 4-Runner	19	21	2.4	M5	FI
Toyota 4-Runner	15	19	3.0	L4	FI
Toyota 4-Runner	16	19	3.0	M5	FI
Toyota Truck	18	20	2.4	L4	FI
Toyota Truck	19	22	2.4	M5	FI
Toyota Truck	15	20	3.0	L4	FI
Toyota Truck	16	19	3.0	M5	FI
Special Purpose Vehicles/Cab Chassis					
Cadillac Commercial Chassis	16	25	4.5	L4	FI
Chevrolet S10 Cab Chassis 2wd	19	25	2.5	L3	FI
Dodge Dakota Cab Chassis 2wd	12	12	3.9	L4	FI
Dodge Dakota Cab Chassis 2wd	13	17	3.9	M5	FI
Dodge D250 Cab Chassis 2wd	11	13	5.9	A4	FI
Buick Coachbuilder Wagon	17	24	5.0	L4	4bc
Toyota Cab/Chassis 2wd	11	11	3.0	L4	FI
Toyota Cab/Chassis 2wd	12	12	3.0	M5	FI
Cargo Vans					
Chevrolet Astro AWD	17	21	4.3	L4	FI
Chevrolet Astro	19	25	2.5	L4	FI
Chevrolet Astro	21	26	2.5	M5	FI
Chevrolet Astro	17	22	4.3	L4	FI
Chevrolet G10/20 Van	16	18	4.3	A3	FI
Chevrolet G10/20 Van	17	22	5.0	L4	FI
Chevrolet G10/20 Van	14	15	5.0	A3	FI
Chevrolet G10/20 Van	15	20	5.0	L4	FI
Chevrolet G10/20 Van	15	19	5.7	L4	FI
Chevrolet G10/20 Van Diesel	17	23	6.2	L4	FI
Chevrolet G30 Van	14	14	4.3	A3	FI
Chevrolet G30 Van	16	21	4.3	L4	FI
Dodge B150/B250 Van	15	18	3.9	A4	FI
Dodge B150/B250 Van	15	17	3.9	L3	FI
Dodge B150/B250 Van	13	18	3.9	M5	FI
Dodge B150/B250 Van	13	16	5.2	A4	FI
Dodge B150/B250 Van	13	16	5.2	L3	FI
Dodge B150/B250 Van	13	17	5.2	L4	FI
Dodge B150/B250 Van	12	14	5.9	A4	FI
Dodge B350 Van	13	15	5.2	A4	FI
Dodge B350 Van	13	17	5.2	L4	FI
Dodge B350 Van	11	14	5.9	A4	FI
Ford Aerostar	17	23	3.0	L4	FI
Ford Aerostar Van	17	23	3.0	M5	FI
Ford E150 Econoline	14	15	4.9	A3	FI
Ford E150 Econoline	15	19	4.9	L4	FI
Ford E150 Econoline	13	17	5.0	L4	FI
Ford E150 Econoline	11	15	5.8	L4	FI
Ford E250 Econoline	14	15	4.9	A3	FI
Ford E250 Econoline	14	17	4.9	L4	FI
Ford E250 Econoline	13	16	5.0	L4	FI
Ford E250 Econoline	11	15	5.8	L4	FI
GMC G15/25 Vandura	16	18	4.3	A3	FI
GMC G15/25 Vandura	17	22	4.3	L4	FI
GMC G15/25 Vandura	14	15	5.0	A3	FI
GMC G15/25 Vandura	15	20	5.0	L4	FI
GMC G15/25 Vandura	15	19	5.7	L4	FI
GMC G15/25 Vandura Diesel	17	23	6.2	L4	FI
GMC G35 Vandura	14	14	4.3	A3	FI
GMC G35 Vandura	16	21	4.3	L4	FI
GMC Safari AWD	17	21	4.3	L4	FI
GMC Safari	19	25	2.5	L4	FI
GMC Safari	21	26	2.5	M5	FI
GMC Safari	17	22	4.3	L4	FI
Mitsubishi Van	20	22	2.4	L4	FI
Passenger Vans					
Chevrolet Astro AWD	16	20	4.3	L4	FI
Chevrolet Astro	17	22	4.3	L4	FI
Chevrolet G10/20 Sportvan	16	21	4.3	L4	FI
Chevrolet G10/20 Sportvan	14	17	5.0	L4	FI
Chevrolet G10/20 Sportvan	13	17	5.7	L4	FI
Chevrolet G10/20 Sportvan Diesel	16	22	6.2	L4	FI
Chevrolet G30 Sportvan	13	18	5.7	L4	FI
Nissan Van	17	20	2.4	L4	FI
Nissan Van	18	21	2.4	M5	FI
Dodge B150/B250	15	17	3.9	A4	FI
Dodge B150/B250	15	17	3.9	L3	FI
Dodge B150/B250	13	17	3.9	M5	FI
Dodge B150/B250	12	15	5.2	A4	FI
Dodge B150/B250	13	16	5.2	L3	FI
Dodge B150/B250	13	17	5.2	L4	FI
Dodge B150/B250	11	13	5.9	A4	FI
Dodge B350	12	15	5.2	A4	FI
Dodge B350	13	17	5.2	L4	FI
Dodge B350	10	13	5.9	A4	FI
Ford Aerostar	16	22	3.0	L4	FI
Ford Aerostar	17	22	3.0	M5	FI
Ford E150 Club Wagon	14	17	4.9	L4	FI
Ford E150 Club Wagon	13	16	5.0	L4	FI
Ford E150 Club Wagon	11	15	5.8	L4	FI
GMC G15/25 Rally	16	21	4.3	L4	FI
GMC G15/25 Rally	14	17	5.0	L4	FI
GMC G15/25 Rally	13	17	5.7	L4	FI
GMC G15/25 Rally Diesel	16	22	6.2	L4	FI
GMC G35 Rally	13	18	5.7	L4	FI
GMC Safari AWD	16	20	4.3	L4	FI
GMC Safari	17	22	4.3	L4	FI
Mitsubishi Wagon	18	21	2.4	L4	FI
Volkswagen Vanagon Syncro 4wd	16	16	2.1	M5C	FI
Volkswagen Vanagon	17	18	2.1	A3	FI
Volkswagen Vanagon	18	19	2.1	M4	FI
Special Purpose Vehicles/2wd					
Chevrolet APV	18	23	3.1	L3	FI
Chevrolet R1500 Suburban	13	18	5.7	L4	FI
Chevrolet R1500 Suburban Diesel	16	23	6.2	L4	FI
Chevrolet S10 Blazer	18	23	4.3	L4	FI
Chevrolet S10 Blazer	17	23	4.3	M5	FI
Nissan Axxess	20	24	2.4	L4	FI
Nissan Axxess	21	27	2.4	M5	FI
Nissan Pathfinder	16	19	3.0	L4	FI

U.S. AUTOMOTIVE TRADE BY QUANTITY

Passenger cars

Country	Trade	June 1988	June 1989	July 1987-June 1988	July 1988-June 1989
Japan	Export	1,167	932	10,020	22,282
	Import	167,077	168,631	2,266,942	2,155,882
Canada	Export	52,471	20,891	578,724	462,539
	Import	121,302	100,496	1,087,524	1,135,341
West Germany	Import	16,165	11,395	294,294	253,774
South Korea	Import	20,793	22,907	453,376	399,618
Sweden	Import	10,505	7,409	110,091	112,920
Mexico	Import	12,380	17,202	146,789	154,202
Yugoslavia	Import	1,177	0	46,910	6,861
United Kingdom	Import	2,581	1,717	44,032	29,364
Italy	Import	199	921	7,380	7,168
France	Import	763	655	14,415	12,160
Brazil	Import	3,198	6,437	68,179	46,210
Others	Export	15,163	9,461	101,609	145,772
	Import	1,792	1,346	18,327	24,322
Car total	Export	68,801	31,284	690,353	630,925
	Import	357,932	339,116	4,558,259	4,337,822
TRADE BALANCE		(289,131)	(307,832)	(3,867,906)	(3,706,897)
Light trucks (up to 10,000 lbs. GVW)					
Canada	Export	13,685	9,517	170,372	141,016
	Import	29,584	40,570	242,669	377,366
Japan	Import	46,025	35,493	604,879	482,784
Mexico	Import	5	0	3,093	11
Others	Export	3,226	1,027	24,939	24,475
	Import	16	12	1,727	1,523
Truck total	Export	16,911	10,544	195,312	165,491
	Import	75,630	76,075	852,368	861,684
Trade balance		(58,719)	(65,531)	(657,056)	(696,193)
Car and truck total	Export	85,712	41,828	885,665	796,416
	Import	433,562	415,191	5,410,627	5,199,506
TRADE BALANCE		(347,850)	(373,363)	(4,524,962)	(4,403,090)

Compiled by Automotive News from official statistics of the U.S. Commerce Department, as reported by the U.S. International Trade Commission. Because of rounding, figures may not add to the totals shown.

U.S. AUTOMOTIVE TRADE BY VALUE

(x $1,000)

Passenger cars

Country	Trade	June 1988	June 1989	July 1987-June 1988	July 1988-June 1989
Japan	Export	$ 14,533	$ 14,856	$ 133,608	$ 296,274
	Import	1,536,215	1,725,948	20,539,718	20,583,375
Canada	Export	518,305	277,139	6,000,215	5,102,049
	Import	1,344,378	1,136,571	12,070,535	12,757,366
West Germany	Import	467,345	265,897	7,364,064	5,870,105
South Korea	Import	111,455	128,258	2,394,113	2,279,194
Sweden	Import	164,106	119,601	1,671,675	1,806,466
Mexico	Import	105,952	150,120	1,275,848	1,342,247
Yugoslavia	Import	3,914	0	122,285	17,900
United Kingdom	Import	78,872	59,502	1,157,017	948,762
Italy	Import	10,336	25,365	171,906	196,890
France	Import	7,165	7,598	153,884	137,834
Brazil	Import	19,103	39,524	366,371	275,668
Others	Export	194,103	130,272	1,328,402	1,864,423
	Import	30,406	19,227	291,119	376,088
Car total	Export	726,941	422,267	7,462,225	7,262,746
	Import	3,879,246	3,677,610	47,578,536	46,591,896
Trade balance		(3,170,305)	(3,255,343)	(40,116,311)	(39,329,150)
Light trucks (up to 10,000 lbs. GVW)					
Canada	Export	$ 128,797	$ 105,939	$ 1,704,149	$ 1,540,076
	Import	337,502	524,493	2,621,777	4,518,471
Japan	Import	261,115	206,425	3,390,992	3,046,467
Mexico	Import	1,492	104	29,019	7,414
Others	Export	40,561	11,502	315,058	298,128
	Import	12,016	2,461	134,530	79,670
Truck total	Export	169,358	117,441	2,019,207	1,838,204
	Import	612,124	733,483	6,176,318	7,652,023
Trade balance		(442,766)	(616,042)	(4,157,111)	(5,813,819)
Car and truck total	Export	896,299	539,708	9,481,432	9,100,950
	Import	4,491,370	4,411,093	53,754,854	54,243,919
VEHICLE TRADE BALANCE		(3,595,071)	(3,871,385)	(44,273,422)	(45,142,969)
TOTAL U.S. Merchandise trade (customs value)	Export	26,706,000	30,914,300	291,110,100	345,972,000
	Import	37,303,600	39,084,600	427,306,300	458,633,600
TRADE BALANCE		(10,597,600)	(8,170,300)	(136,196,200)	(112,661,600)

Major decline in exports boosts auto trade deficit

WASHINGTON — The U.S. trade deficit for passenger cars and light trucks increased 7.7 percent in June because of a 39.8 percent drop in the value of exports. The value of imports declined 1.8 percent for the month.

The latest figures from the U.S. Commerce Department show the automotive trade deficit in June was $3.87 billion compared with a deficit of $3.60 billion in June last year.

The U.S. balance of trade in finished vehicles has been worsening throughout the year, despite a generally encouraging improvement for American trade overall. The total U.S. trade deficit was $8.2 billion in June, down 22.9 percent from a year ago.

The annualized U.S. automotive trade deficit grew 2.0 percent in June to $45.14 billion. The deficit for the 12-month period ended June 1988 was $44.27 billion.

June's big drop in the value of U.S. exports was reflected in a 46.5 percent decline in the value of passenger-car exports to Canada and a 32.9 percent drop in the value of passenger-car exports to countries labeled "others" by the Commerce Department. The value of passenger-car exports to Japan increased 2.2 percent in June.

The value of light-truck exports fell 30.7 percent in June, led by a 71.6 percent drop in the value of exports to countries identified as "others" and a 17.7 percent drop in the value of light-truck exports to Canada.

During the most recent 12 months, U.S. exports have fallen 10.1 percent, from 885,655 units in the year ended June 1988, to 796,416 in the year ended June 1989.

Imports of cars and light trucks also declined on an annualized basis, but from a much higher base. The number of vehicles imported for the year ended June 1988 was 5.41 million. That number fell to 5.20 million units for the year ended June 1989.

Imports in June 1989 totaled 339,116 cars. June imports of light trucks totaled 76,075 vehicles.

Imports of Japanese passenger cars in June were 168,631, up 0.9 percent over 167,077 a year earlier. Imports of Japanese light trucks fell 22.9 percent to 35,493 from 46,025.

Imports of cars from Canada were down 17.2 percent, while Canada's truck shipments to the United States jumped 37.1 percent.

West German car imports fell 29.5 percent in June to 11,395 units, after a 22.3 percent increase the previous month.

The number of cars shipped from South Korea increased 10.2 percent in June to 22,907.

Swedish car imports fell 29.5 percent to 7,409 in June, although Swedish imports were up 2.6 percent on an annualized basis.

Mexico sent 38.9 percent more cars to the United States in June, while Yugoslavia shipped no cars to the United States that month.

Car shipments from the United Kingdom were down 33.5 percent from June a year ago. Italy shipped significantly more cars to the United States in June, 921 compared with 199 a year ago. But Italian car imports were down 2.9 percent on an annualized basis.

In June, 655 cars were imported from France, compared with 768 last year. French imports were 15.6 percent below last year's annualized tally.

Brazilian car shipments were up 101.3 percent to 6,437 in June, but down 32.2 percent for 12 months.

Nations classed as "others" exported 1,346 passenger cars to the United States in June compared with 1,792 a year earlier. On an annualized basis, those shipments increased 32.7 percent.

Classic Caddy grille

E&G Classics, Columbia, Md., offers a custom grille for the Cadillac Brougham, model years 1980-1990. Estimated retail price is $767.

GM, Robotic Vision sign pact

HAUPPAUGE, N.Y. — General Motors has signed an agreement with Robotic Vision Systems that provides nearly $2 million in financing and extends and modifies a warrant held by the automaker.

The agreement provides Robotic Vision Systems with a $700,000 contract for work related to the company's newest product, a three-dimensional surface mapper. The surface mapper will be used in all phases of GM's manufacturing including design and assembly.

The agreement also provides the firm with $1.1 million in short-term financing.

As part of the deal, GM extended and modified its warrant that covers about 1.1 million Robotic Vision Systems shares. The warrant was to expire Dec. 12, 1989. The new agreement extends the expiration to Dec. 12, 1993. The $7 per share price was increased to $9.67 to reflect Robotic Vision Systems' current growth expectations.

GM owns about 19 percent of Robotic Vision Systems, a maker of inspection systems.

INCENTIVE WATCH

	Customer incentives: Rebates	Finance Rates (Pct.) — Months — 24	36	48	60	Expiration Date	Dealer incentives: Type	Expiration Date
Chrysler Motors (1988-89 models)								
Chrysler	$500 - $2,000	0.0*	5.9	6.9	10.9	None		
Dodge Cars	$500 - $1,500	0.0*	5.9	6.9	10.9	None		
Dodge Trucks	$500 - $2,500	0.0*	5.9	6.9	10.9	None		
Eagle	$1,000 - $2,000	0.0*	5.9	6.9	10.9	None		
Jeep Cherokee, Wagoneer Ltd.	$1,000	4.9	7.9	10.9	11.9	None		
Other Jeep	$500 - $1,000	0.0*	5.9	6.9	10.9	None		
Plymouth	$500 - $1,500	2.9	5.9	6.9	10.9	None		
*2.9 percent on some models								
Chrysler Motors (1990 models)								
Dodge Trucks	**$500 - $2,000**	**2.9***	**5.9**	**6.9**	**10.9**	**None**		
Jeep	**$500 - $1,000**	**2.9***	**5.9**	**6.9**	**10.9**	**None**		
*2.9 percent on some models								
Ford Motor Co. (1989 models)								
Ford Cars	$500 - $1,000	6.9	8.9	9.9	10.9	None		
Festiva, Escort							$200 - $500, quota	Nov. 7
Taurus SHO							$1,000	
Ford Trucks*	$500 - $1,250	6.9	8.9	9.9	10.9	None		
Ranger, Bronco II							$250	Nov. 7
Lincoln	$1,000 - $1,500					None		
Mercury	$600 - $1,500	6.9	8.9	9.9	10.9	None		
Merkur	$3,000 - $4,000					None	$1,000	Nov. 7**
*Ford truck finance incentive applies only to Ranger and Bronco II **No expiration date for Scorpio								
Ford Motor Co. (1990 models)								
Ford Cars	**$500 - $800**	**6.9**	**8.9**	**9.9**	**10.9**	**None**		
Festiva, Escort							**$200 - $500, quota**	**Nov. 7**
Tempo							**$250**	**Nov. 7**
Taurus SHO							**$1,000**	**Nov. 7**
Ranger, Bronco II	**$1,000 - $1,250**	**6.9**	**8.9**	**9.9**	**10.9**	**None**	**$200 - $500, quota**	**Nov. 7**
Mercury Topaz, Cougar, Sable	**$600**	**6.9**	**8.9**	**9.9**	**10.9**	**None**		
Continental							**$1,000**	**Nov. 7**
General Motors (1989 models)								
Buick								
Chevrolet Cars	$400 - $1,000	6.9	8.9	9.9	10.9	None		
Chevrolet Trucks	$500 - $1,250	6.9	8.9	9.9	10.9	None		
GMC	$500 - $1,250	6.9	8.9	9.9	10.9	None		
Oldsmobile	$200 - $2,500*	6.9	8.9	9.9	10.9	None		
Pontiac	$600 - $1,000	6.9	8.9	9.9	10.9	None		
*Based on option package selected.								
General Motors (1990 models)								
Buick	**$200 - $1,000***	**6.9**	**8.9**	**9.9**	**10.9**	**None**	**$1,000 - $2,000 on Reatta, Riviera, Park Avenue Ultra**	**Nov. 30**
Chevrolet Cars	**$750 - $800 on Corsica, Lumina, Prizm**	**6.9**	**8.9**	**9.9**	**10.9**	**None**		
Chevrolet Trucks	**$1,000 - $1,250 on S-10 Pickup, Blazer**	**6.9**	**8.9**	**9.9**	**10.9**	**None**		
GMC	**$1,000 - $1,250 on S-15 Pickup, Blazer**	**6.9**	**8.9**	**9.9**	**10.9**	**None**		
Oldsmobile	**$200 - $1,000***	**6.9**	**8.9**	**9.9**	**10.9**	**None**		
Pontiac	**$600 - $1,000**	**6.9**	**8.9**	**9.9**	**10.9**	**None**		
*Based on option package selected.								
Audi (1989 models)							$1,800 - $4,500, quota	Oct. 31
Hyundai (1988-89 models)								
California dealers							$400	Nov. 2
Other dealers							$300 - $1,000, quota	Nov. 2
Isuzu (1989 models)							$1,500, based on quota	Dec. 31
Mazda trucks (1989)	$750					Nov. 1		
Mitsubishi (1989-90)							$500 - $1,000	Oct. 31
Nissan								
Stanza (1989)	$1,500 - $2,000			7.9	9.9	Dec. 4		
Axxess, trucks							up to $2,000	Dec. 4
Peugeot							$1,000	Dec. 31
Sterling	$3,500 - $5,000					Nov. 30		
Subaru	$500 - $3,000*					Nov. 2	$500 - $3,000*	Nov. 2
*Rebates go to the customer in some regions and to the dealer in other regions.								
Toyota Cressida							$1,500	Nov. 2
Corolla, Camry							$500	Nov. 2
Volkswagen	$500 - $3,000	2.9	6.9	7.9	9.9	Oct. 31		

MAZDA

FROM PAGE 1

to schedule more overtime during the early production of the new 626 to repair a huge backlog of defective and unshippable cars. In exchange, Local 3000 bargainers held out for a new attendance policy and other changes they had sought for some time.

UAW members at Flat Rock are voting today on provisions that will give them 15 days of no-fault absences per year. Under one option, workers would receive 60 percent pay for all 15 days.

Under a second option, they would receive 60 percent pay for four days. The remaining 11 days would still be considered "no-fault" — that is, time off without a required excuse. The current good-attendance bonus of $500 would be tripled to $1,500.

The workers' third option is to retain the current policy.

A Mazda spokesman denied the buildup of unshippable cars caused the change. "There is no connection between the cars that are in the reprocess system and the current negotiations," the spokesman said. "That is tied to supply of parts and our policy of not letting cars out the door without having them in top Mazda quality condition."

Current negotiations are part of the launch process, the spokesman said. "Nobody is holding anything over anyone's head. There are a number of issues that needed discussion and this is part of the process. We have encouraged our employees to tell us what they think. We look at it as an improvement in the process — having employees tell us where improvement needs to be made," he said.

In the negotiations that led to the vote, Mazda also promised to hire temporary employees — the controversial "support members" — if they have been on the job for 90 days.

Some 135 support members were hired Oct. 1, and the company pledged to review the status of temporary employees monthly. Support members are paid less and have fewer union rights. They are deployed as needed throughout the plant.

Previously, some support members had worked overtime up to nine months without achieving regular status. That gave rise to bitter accusations that the union had caved in to management in allowing second-class status for support members.

Local union officials at Mazda who ran on the dissident New Directions slate credited their gains to the support of Bob King, the new director of UAW Region 1A. The international's support of the local officials, who won their posts early this year by defeating candidates appointed by the former regional director, Ernest Lofton, may be a sign the UAW is prepared to back stronger union demands at unionized transplants.

That the gains were won at a transplant with new local leaders make them "particularly interesting," said Harley Shaiken, professor of work and technology at the University of California at San Diego. "That combination raises important issues with the entire industry. This is not quite on the eve of the 1990 (contract) talks, but it's close," said Shaiken.

Shaiken said the new provisions are a breakthrough. "They reflect the strength of the local union and the fact that Mazda wants to have a constructive relationship with the local and is willing to provide the workforce an important level of flexibility.

"Flexibility is a term we've come to associate strictly with managerial prerogative, and here Mazda appears to be giving their workers an important degree of flexibility," he said.

Bargainers from UAW Local 3000 at Flat Rock won the new rights and others in exchange for "relaxed launch language" during the launch of the Mazda 626, said Greg Drudi, bargaining chairman.

Following a buildup at one time of nearly 4,000 carsthat needed repairs, Mazda sought and won the right to schedule overtime seven days a week for 250 repairmen until Thanksgiving.

Parts shortages and defective parts caused the buildup of unshippable cars, Drudi said. The situation recalls earlier problems Mazda experienced with suppliers.

In March 1988, Mazda President Osamu Nobuto, in widely publicized comments to the University of Michigan's International Automotive Industry Conference, complained about local suppliers, saying Americans have tolerated late deliveries as a way of life.

Nobuto also told the conference that the parts defect rate for local American firms "is anywhere from three to five times higher than among Japanese firms."

Drudi said the defective and missing parts included mirrors and visors.

It is not known if Ford Probe and Mazda MX-6 production at the plant has been affected by the parts problem.

Negotiators at Flat Rock originally settled on the first absence program option (15 days at 60 percent pay with no fault) early in September, which was to have begun Oct. 1. But in the intervening weeks the number of unexcused absences soared at the plant, as workers learned they would be starting with clean slates Oct. 1.

"There were so many absences they almost couldn't run the plant," said a local UAW official who did not wish to be identified. "People were blowin' off days. That's an indication of the morale here. Happy campers don't skip whenever they can," he said.

Management, including Nobuto, then pushed for the second option, which puts a premium on attendance by tripling the good attendance bonus.

The Mazda spokesman said, "The attendance level at the Mazda plant is better than or equal to industry standards. However, we aren't satisified with that, and I don't think anyone can be satisfied with industry standards. All employees understand that the success of the operation depends on their active participation. We have an ongoing commitment to carry on ongoing discussions. This absentee question is part of our negotiations."

Since the union contract prohibits strikes for any reason, the workforce's right to take days off without penalty could prove an alternative weapon during disputes. But Shaiken said, "Having the ability to take the days off doesn't necessarily mean they will be used in a disruptive way."

On the contrary, Shaiken believes Mazda's new program could actually improve morale and labor relations at the plant. Mazda's decision to change attendance policy "moves in a different direction than some of the changes we've seen in transplants and the Big 3 where the trend has been towards increased workforce discipline rather than some openness. This may work in Mazda's favor.

"The ironic result is it gives Mazda more stability with its workforce," Shaiken said.

PRODUCTION: '89 MODEL YEAR

OUTPUT, MODEL YEAR 1989 vs. 1988

U.S. CAR	1989 Model Year	Pct. of Output	1988 Model Year	Pct. of Output	Pct. of Change '89 vs. '88
Horizon	45,341	0.64	66,997	0.97	– 0.33
Sundance	104,150	1.47	97,488	1.41	0.06
Reliant	36,012	0.51	138,091	2.00	– 1.49
Acclaim	77,752	1.10	0	0.00	– 1.10
Caravelle	202	0.00	22,060	0.32	– 0.32
Gran Fury	4,985	0.07	11,434	0.17	– 0.10
Total Plymouth	268,442	3.80	336,070	4.87	– 1.07
LeBaron K	0	0.00	29,091	0.42	– 0.42
LeBaron J	99,633	1.41	88,540	1.28	0.13
LeBaron GTS	6,549	0.09	19,406	0.28	– 0.19
New Yorker E-Class	0	0.00	9,605	0.14	– 0.14
New Yorker C-Class	100,461	1.42	82,616	1.20	0.22
Fifth Avenue	17,454	0.25	49,029	0.71	– 0.46
Total Chrysler	224,097	3.17	278,287	4.03	– 0.86
Omni	46,239	0.65	64,740	0.94	– 0.28
Daytona	80,878	1.14	74,852	1.08	0.06
Shadow	99,743	1.41	102,619	1.49	– 0.08
Aries	36,932	0.52	123,533	1.79	– 1.27
Dodge 600	0	0.00	21,221	0.31	– 0.31
Dynasty	137,718	1.95	68,143	0.99	0.96
Lancer	5,019	0.07	13,829	0.20	– 0.13
Spirit	68,181	0.96	0	0.00	0.96
Diplomat	6,429	0.09	20,708	0.30	– 0.21
Total Dodge	481,139	6.81	489,645	7.09	– 0.29
CHRYSLER MOTORS	973,678	13.78	1,104,002	15.99	– 2.22
Escort	363,122	5.14	422,035	6.11	– 0.98
Mustang	209,769	2.97	211,225	3.06	– 0.09
Tempo	151,934	2.15	163,409	2.37	– 0.22
Taurus	395,261	5.59	387,577	5.61	– 0.02
Thunderbird	114,868	1.63	147,243	2.13	– 0.51
Total Ford Div.	1,234,954	17.47	1,331,489	19.29	– 1.81
Topaz	66,930	0.95	58,412	0.85	0.10
Cougar	97,312	1.38	119,162	1.73	– 0.35
Sable	130,657	1.85	121,285	1.76	0.09
Total Mercury	294,899	4.17	298,859	4.33	– 0.16
Continental	57,775	0.82	41,287	0.60	0.22
Mark VII	29,658	0.42	38,259	0.55	– 0.13
Lincoln Town Car	128,533	1.82	201,113	2.91	– 1.09
Total Lincoln	215,966	3.06	280,659	4.07	– 1.01
Total L-M Division	510,865	7.23	579,518	8.39	– 1.17
FORD MOTOR CO.	1,745,819	24.70	1,911,007	27.68	– 2.98
Skyhawk	23,359	0.33	29,134	0.42	– 0.09
Skylark/Somerset	61,540	0.87	54,792	0.79	0.08
Century	152,809	2.16	113,258	1.64	0.52
Regal (rwd)	0	0.00	10,635	0.15	– 0.15
Riviera	21,189	0.30	8,625	0.12	0.17
Electra	83,566	1.18	91,913	1.33	– 0.15
LeSabre (fwd)	149,572	2.12	136,044	1.97	0.15
LeSabre (rwd)	7,743	0.11	9,659	0.14	– 0.03
Reatta	7,009	0.10	4,708	0.07	0.03
Total Buick	506,787	7.17	458,768	6.65	0.53
Cimarron	0	0.00	6,454	0.09	– 0.09
Eldorado	30,925	0.44	33,210	0.48	– 0.04
Seville	22,909	0.32	22,968	0.33	– 0.01
Brougham (rwd)	40,260	0.57	53,130	0.77	– 0.20
Deville (fwd)	178,938	2.53	152,513	2.21	0.32
Allante	3,298	0.05	2,569	0.04	0.01
Total Cadillac	276,330	3.91	270,844	3.92	– 0.01
Cavalier	376,626	5.33	322,939	4.68	0.65
Camaro	110,739	1.57	96,275	1.39	0.17
Celebrity	153,268	2.17	197,289	2.86	– 0.69
Corsica/Beretta	411,409	5.82	377,764	5.47	0.35
Monte Carlo	0	0.00	30,174	0.44	– 0.44
Caprice	197,044	2.79	189,086	2.74	0.05
Corvette	26,412	0.37	22,789	0.33	0.04
Total Chevrolet	1,275,498	18.05	1,236,316	17.91	0.14
Calais	109,891	1.55	110,276	1.60	– 0.04
Firenza	0	0.00	12,260	0.18	– 0.18
Cutlass Ciera	79,953	1.13	21,620	0.31	0.82
Cutlass Supreme	100,026	1.42	94,723	1.37	0.04
Cutlass Supreme Classic	0	0.00	27,678	0.40	– 0.40
Toronado	9,877	0.14	16,496	0.24	– 0.10
88 (fwd)	152,039	2.15	160,913	2.33	– 0.18
88 (rwd)	8,929	0.13	11,114	0.16	– 0.03
Olds 98	73,103	1.03	79,935	1.16	– 0.12
Total Oldsmobile	533,818	7.55	535,015	7.75	– 0.20
Sunbird	139,644	1.98	93,694	1.36	0.62
Grand Am	246,418	3.49	235,371	3.41	0.08
Firebird	64,406	0.91	62,467	0.90	0.01
Grand Prix	136,747	1.93	86,357	1.25	0.68
Pontiac 6000	100,586	1.42	61,446	0.89	0.53
Bonneville	108,653	1.54	108,580	1.57	– 0.04
Safari/Paris	5,146	0.07	6,397	0.09	– 0.02
Fiero	0	0.00	26,402	0.38	– 0.38
Total Pontiac	801,600	11.34	680,714	9.86	1.48
GENERAL MOTORS	3,394,033	48.02	3,181,657	46.09	1.93
HONDA	347,432	4.92	358,274	5.19	– 0.27
Civic	116,113	1.64	97,859	1.42	0.23
Accord	231,319	3.27	260,415	3.77	– 0.50
MAZDA	228,756	3.24	105,616	1.53	1.71
NISSAN	116,644	1.64	91,281	1.33	0.31
NUMMI	153,080	2.17	112,034	1.62	0.54
Corolla	69,950	0.99	40,918	0.59	0.40
Nova	83,130	1.18	71,116	1.03	0.15
TOYOTA	108,185	1.53	0	0.00	1.53
VOLKSWAGEN	0	0.00	39,647	0.57	– 0.57
Golf/GTI	0	0.00	25,697	0.37	– 0.37
Jetta	0	0.00	13,950	0.20	– 0.20
Total Cars, U.S.	7,067,627		6,903,518		
Total Cars, U.S., Canada	7,941,090		7,912,574		

CANADIAN CAR	1989 Model Year	Pct. of Output	1988 Model Year	Pct. of Output	Pct. of Change '89 vs. '88
Eagle	0	0.00	2,305	0.23	– 0.23
Premier	43,179	4.94	45,546	4.51	0.43
CHRYSLER MOTORS	43,179	4.94	47,851	4.74	0.20
Tempo	136,851	15.67	149,853	14.85	0.82
Topaz	61,205	7.01	53,474	5.30	1.71
Crown Victoria	134,103	15.35	125,189	12.41	2.95
Grand Marquis	138,913	15.90	121,067	12.00	3.91
FORD MOTOR CO.	471,072	53.93	449,583	44.55	9.38
Celebrity	22,452	2.57	49,314	4.89	– 2.32
Cutlass Ciera	159,636	18.28	229,116	22.71	– 4.43
Pontiac 6000	0	0.00	58,609	5.81	– 5.81
Regal	88,757	10.16	130,000	12.88	– 2.72
GENERAL MOTORS	270,845	31.01	467,039	46.28	– 15.28
HONDA	71,520	8.19	38,010	3.77	4.42
TOYOTA	10,236	1.17	0	0.00	1.17
VOLVO	6,611	0.76	6,573	0.66	0.10
Total Cars, Canada	873,463		1,009,056		

U.S. TRUCK	1989 Model Year	Pct. of Output	1988 Model Year	Pct. of Output	Pct. of Change '89 vs. '88
Caravan	102,555	2.47	90,927	2.20	0.27
Dakota	102,388	2.46	107,377	2.60	– 0.13
Caravan C/V	7,985	0.19	11,545	0.28	– 0.09
Ram pickups	102,458	2.47	111,990	2.71	– 0.24
Total Dodge	315,386	7.59	321,839	7.79	– 0.20
Cherokee	203,213	4.89	177,715	4.30	0.59
Comanche	33,376	0.80	47,065	1.14	– 0.34
Pickup	0	0.00	300	0.01	– 0.01
Grand Wagoneer	12,856	0.31	16,025	0.39	– 0.08
Wagoneer	8,680	0.21	12,246	0.30	– 0.09
Total Jeep	258,125	6.21	253,351	6.13	0.08
Voyager	95,776	2.30	83,755	2.03	0.28
Town & Country	1,798	0.04	0	0.00	0.04
Total C-P Div.	97,574	2.35	83,755	2.03	0.32
CHRYSLER MOTORS	671,085	16.15	658,945	15.95	0.20
Aerostar	257,436	6.19	174,629	4.23	1.97
Bronco	69,470	1.67	58,964	1.43	0.24
Bronco II	103,591	2.49	150,161	3.63	– 1.14
Econoline	241,531	5.81	224,077	5.42	0.39
Mediums/Heavies	61,031	1.47	58,680	1.42	0.05
Light trucks	517,444	12.45	477,316	11.55	0.90
Ranger	266,526	6.41	369,812	8.95	– 2.54
Total Ford Div.	1,517,029	36.50	1,513,639	36.63	– 0.13
FORD MOTOR CO.	1,517,029	36.50	1,513,639	36.63	– 0.13
Astro	172,407	4.15	169,533	4.10	0.05
Blazer	28,274	0.68	28,446	0.69	– 0.01
Mediums/Heavies	14,797	0.36	19,430	0.47	– 0.11
P-Model	36,067	0.87	40,633	0.98	– 0.12
Pickups	402,723	9.69	390,080	9.44	0.25
S-10	267,388	6.43	276,785	6.70	– 0.26
S-10 Blazer	184,657	4.44	157,264	3.81	0.64
Sportsvan/Van	89,991	2.17	87,254	2.11	0.05
Suburban	73,438	1.77	70,660	1.71	0.06
Total Chevrolet	1,269,742	30.55	1,240,085	30.01	0.54
Jimmy	7,899	0.19	8,503	0.21	– 0.02
Mediums/Heavies	21,429	0.52	39,198	0.95	– 0.43
P-Model	4,498	0.11	5,414	0.13	– 0.02
Pickups	122,108	2.94	120,786	2.92	0.02
S-15	61,315	1.48	64,453	1.56	– 0.08
S-15 Jimmy	51,592	1.24	50,940	1.23	0.01
Safari	44,564	1.07	42,947	1.04	0.03
Suburban	30,180	0.73	31,163	0.75	– 0.03
Vandura/Rally Vans	25,716	0.62	31,625	0.77	– 0.15
Total GMC	369,301	8.89	395,029	9.56	– 0.67
GENERAL MOTORS	1,639,043	39.44	1,635,114	39.57	– 0.13
NAVISTAR*	82,185	1.98	84,233	2.02	– 0.04
NISSAN	89,783	2.16	101,879	2.47	– 0.31
AM GENERAL*	22,320	0.54	22,680	0.55	– 0.01
MISCELLANEOUS*	134,820	3.23	115,920	2.81	0.42
Total Trucks, U.S.	4,156,265		4,132,410		

CANADIAN TRUCK	1989 Model Year	Pct. of Output	1988 Model Year	Pct. of Output	Pct. of Change '89 vs. '88
Caravan	144,708	15.18	134,588	14.04	1.14
Caravan C/V	11,073	1.16	11,834	1.23	– 0.07
Ram Wagon	29,175	3.06	23,980	2.50	0.56
Ram Van	78,476	8.23	62,323	6.50	1.73
Total Dodge	263,432	27.63	232,725	24.27	3.35
Voyager	125,575	13.17	121,362	12.66	0.51
Total Plymouth	125,575	13.17	121,362	12.66	0.51
Wrangler	71,025	7.45	46,131	4.81	2.64
Total Jeep	71,025	7.45	46,131	4.81	2.64
CHRYSLER MOTORS	460,032	48.24	400,218	41.74	6.50
FORD MOTOR (lt. trks.)	158,005	16.57	159,730	16.66	– 0.09
Light trucks	162,153	17.00	209,071	21.80	– 4.80
Vans	63,533	6.66	63,401	6.61	0.05
Total Chevrolet	225,686	23.67	272,472	28.42	– 4.75
Light trucks	69,887	7.33	87,855	9.16	– 1.83
Vans	28,659	3.01	27,251	2.84	0.16
Total GMC	98,546	10.33	115,106	12.00	– 1.67
GENERAL MOTORS	324,232	34.00	387,578	40.42	– 6.42
NAVISTAR*	11,306	1.19	11,338	1.18	0.01
Total Trucks, Canada	953,575		958,864		
U.S., Canada Trucks	5,109,840		5,091,274		

*Est.

Model year shows slight output gain

By Kathy Boyer
AUTOMOTIVE NEWS STAFF REPORTER

U.S. and Canadian car and truck production rose slightly in the 1989 model year from the 1988 model year.

The two countries' car and truck makers built 13,050,930 units, 0.36 percent more than the 13,003,848 built in the previous model year.

Both car and truck output increased 0.36 for the 1989 model year. Car output rose 28,516 units to 7,941,090 compared with the 1988 total of 7,912,574. Truck output was 5,109,840, compared with 5,091,274 in the 1988 model year.

In the 1989 model year, transplant and joint-venture companies accounted for 8.62 percent of the units or 1,125,636 cars and trucks. The figures jumped from 6.26 percent or 813,667 cars and trucks produced in the 1988 model year.

With the Big 3 and Navistar International reporting production decreases, the transplant and joint-venture makers posted the only increases for the model year.

General Motors' output of 5,628,153 cars and trucks in the United States and Canada fell 0.76 percent from 5,671,388 in the 1988 season.

Ford Motor Co.'s vehicle output totaled 3,891,925 units, 3.52 percent below the previous model year's 4,033,959, and Chrysler Motors' output of 2,147,974 dipped 2.75 percent from 2,208,711.

Navistar International's plants in Springfield, Ohio, and Chatham, Ontario, produced 93,491 trucks during the model year, 2.18 percent below the 95,571 built in 1988.

Honda, which assembles cars in Marysville, Ohio, and Alliston, Ontario, and is the largest of the transplant companies, built 418,952 cars during the 1989 model year, up 5.72 percent from the 1988 total of 396,284.

Mazda Motor Manufacturing (U.S.A.) in Flat Rock, Mich., built 228,756 U.S. cars in the model year, more than double the 1988 total of 105,616.

Nissan Motor Manufacturing Co. U.S.A., in Smyrna, Tenn., reported production of 206,427 cars and trucks in the model year, 6.87 percent more than the 193,160 built last year.

New United Motor Manufacturing Inc. built 153,080 cars at its Fremont, Calif., plant, 36.64 percent above the 112,034 cars assembled in the 1988 model year.

Toyota, which builds cars in Georgetown, Ky., and Cambridge, Ontario, assembled 118,421 units. Toyota did not produce cars at Georgetown in the 1988 model year and did not report Cambridge production that year.

Volvo built 6,611 cars during the model year at its plant in Halifax, Nova Scotia, up 0.58 percent from 6,573 in 1988.

Diamond-Star Motors, the Chrysler-Mitsubishi joint venture in Normal, Ill., reported no production for the 1989 model year. It has been building 1990 models since it started production late in 1988.

Chevrolet Corsica/Beretta was the car production volume leader in the 1989 model year with 411,409 units, followed by Ford Taurus, 395,261; Chevrolet Cavalier, 376,626; Ford Escort, 363,122; and Pontiac Grand Am, 246,418.

SALES

DOMESTIC CAR SALES, YEAR TO DATE

	Sept. 21 to Sept. 30, 1989	Same Period, 1988	Sept. 1989	Same Month 1988	Jan. 1 to Sept. 30, 1989	Same Period, 1988
Alliance	0	0	0	497	0	4,418
Eagle	0	0	0	0	0	1,392
Talon	658	0	1,323	0	2,106	0
Premier	1,372	1,745	3,412	4,046	35,290	29,686
Total Eagle	2,030	1,745	4,735	4,543	37,396	35,496
Horizon	648	2,237	4,818	5,756	33,549	49,350
Laser	626	0	1,529	0	14,576	0
Sundance	2,370	2,726	8,610	6,489	67,831	66,412
Turismo	0	0	0	0	0	1,115
Reliant	1,108	3,857	2,776	7,867	28,640	87,017
Acclaim	3,911	0	7,892	0	65,735	0
Caravelle	0	183	0	601	733	12,080
Gran Fury	0	346	0	852	1,443	10,635
Total Plymouth	8,663	9,349	25,625	21,565	212,507	226,609
LeBaron K	0	517	0	1,233	787	18,900
LeBaron J	3,497	2,496	7,227	5,911	67,474	78,842
LeBaron GTS	155	536	394	1,371	3,896	13,135
Fifth Avenue (rwd)	155	650	430	1,660	10,750	30,900
Fifth Avenue (fwd)	1,282	0	2,282	0	1,962	0
New Yorker C	1,595	3,605	4,067	8,357	65,273	56,317
New Yorker E	0	23	0	47	237	14,381
Total Chrysler	6,684	7,827	14,400	18,579	150,379	212,475
Omni	657	2,004	4,646	5,685	33,790	47,521
Shadow	2,055	2,519	6,773	5,922	63,659	68,991
Charger	0	0	0	0	0	1,022
Daytona	1,889	1,959	4,531	4,902	54,558	58,697
Aries	888	3,287	2,491	6,504	28,013	77,193
Lancer	111	317	265	851	2,647	8,507
Spirit	3,255	0	6,195	0	53,714	0
Diplomat	0	652	0	1,672	2,551	16,573
Dynasty	2,872	3,505	6,548	7,449	84,584	55,189
Dodge 600	0	150	0	471	808	10,999
Total Dodge	11,727	14,393	31,449	33,456	324,324	344,692
CHRYSLER MOTORS	29,104	33,314	76,209	78,143	724,606	819,272
Escort	16,504	13,529	32,309	33,760	273,149	294,610
Mustang	3,702	4,246	9,987	10,749	135,769	133,631
Tempo	6,822	9,787	16,496	21,635	173,163	216,696
Taurus	12,214	9,729	26,761	20,016	272,527	286,917
Thunderbird	4,316	2,989	10,979	8,067	97,603	97,362
Probe	4,232	4,488	10,032	10,551	107,109	45,647
Crown Victoria	3,145	3,000	8,437	7,623	88,128	88,083
Total Ford Div.	50,935	47,768	115,001	112,401	1,147,448	1,162,946
Lynx/Tracer	1,901	2,677	4,535	5,494	50,056	46,284
Topaz	3,884	3,702	7,164	7,508	69,054	68,429
Sable	3,593	3,561	8,116	7,048	89,214	93,548
Cougar	4,634	2,547	10,097	7,212	83,251	86,966
Grand Marquis	3,860	3,656	9,586	8,836	90,517	87,716
Total Mercury	17,872	16,143	39,498	36,098	382,092	382,943
Continental	1,867	1,684	3,951	4,018	42,362	30,732
Lincoln	3,626	4,405	8,577	10,568	89,122	92,990
Mark VII	735	813	1,399	1,886	20,793	16,289
Total Lincoln	6,228	6,902	13,927	16,472	152,277	140,011
Total L-M Division	24,100	23,045	53,425	52,570	534,369	522,954
FORD MOTOR CO.	75,035	70,813	168,426	164,971	1,681,817	1,685,900
Skyhawk	528	978	1,347	2,018	15,309	20,707
Somerset/Skylark	2,317	1,544	4,633	3,851	49,853	47,264
Century	7,210	5,582	15,514	13,343	104,524	94,440
Regal	4,041	5,563	8,368	12,227	63,687	95,246
LeSabre	6,055	4,795	14,526	10,978	115,693	108,726
Reatta	296	225	647	422	6,156	2,759
Electra	3,368	3,285	8,377	7,934	62,590	65,084
Riviera	881	347	1,778	769	15,169	6,899
Total Buick	24,696	22,319	55,190	51,542	432,981	441,125
Cimarron	7	151	8	383	240	5,133
Allante	131	123	296	223	2,637	2,636
Seville	623	825	1,278	1,648	17,152	16,008
DeVille	8,950	7,306	19,684	12,667	132,829	115,213
Brougham	1,846	2,363	3,805	4,747	27,327	33,354
Eldorado	1,273	1,377	2,702	2,744	24,513	23,302
Total Cadillac	12,830	12,145	27,773	22,412	204,698	195,646
Chevette	0	0	0	0	0	205
Geo Prizm/Nova	4,022	3,425	8,814	8,421	60,973	84,745
Cavalier	11,551	8,467	26,301	20,522	230,666	230,415
Camaro	2,607	2,243	6,168	5,822	83,084	74,715
Celebrity	2,468	7,126	5,869	18,593	134,739	192,950
Corsica/Beretta	10,823	7,451	24,322	19,086	279,800	307,427
Lumina/Monte Carlo	5,956	439	13,290	1,192	60,977	26,651
Caprice	5,972	4,559	14,098	11,123	126,982	128,533
Corvette	1,330	592	2,909	1,382	19,145	18,451
Total Chevrolet	44,729	34,302	101,771	86,141	996,366	1,064,092
Firenza	0	155	0	425	12	7,942
Calais	4,186	3,120	9,463	7,736	76,263	81,799
Cutlass Ciera	11,226	8,562	26,936	22,313	165,794	187,601
Cutlass Supreme	4,191	5,010	10,415	12,268	76,801	85,233
Olds 88	4,997	4,185	12,185	10,646	114,114	124,146
Olds 98	2,202	2,174	5,307	5,783	53,940	56,802
Toronado	624	415	1,267	971	6,741	12,285
Total Oldsmobile	27,426	23,621	65,593	60,142	493,665	555,808
Fiero	0	821	0	1,984	1,961	21,605
Pontiac 1000	0	0	0	0	0	154
Sunbird	3,158	2,784	7,981	6,851	75,614	63,740
Firebird	1,357	1,573	3,165	3,821	48,154	46,380
Grand Am	7,169	6,963	18,759	16,003	158,779	173,620
Pontiac 6000	2,142	2,870	5,474	7,010	54,738	75,108
Grand Prix	4,607	4,385	10,284	12,030	91,081	74,711
Bonneville H	3,668	3,410	8,833	7,507	70,486	83,420
Paris./Safari	157	235	341	579	3,616	5,388
Total Pontiac	22,258	23,841	54,837	55,785	504,429	544,126
GENERAL MOTORS	131,939	116,028	305,164	276,022	2,632,139	2,800,797
HONDA	13,036	9,808	29,481	30,397	293,368	277,884
Civic	6,859	5,359	13,663	11,703	130,813	85,393
Accord	6,177	9,822	15,818	18,694	162,555	192,491
MAZDA	1,386	1,334	2,824	2,780	32,576	23,040
MITSUBISHI	1,416	0	3,807	0	21,576	0
NISSAN	4,456	10,320	7,069	18,048	81,913	91,958
TOYOTA	9,400	3,826	16,762	6,176	151,356	45,250
VOLKSWAGEN	0	0	0	0	0	24,939
DOMESTIC TOTAL	265,772	245,443	609,742	576,535	5,819,351	5,769,040
IMPORT TOTAL			249,300	248,727	2,187,984	2,322,555
INDUSTRY TOTAL			859,042	825,262	7,807,335	8,091,595

U.S.-built Volkswagen models sold after June 30, 1988, are included in import totals.

DOMESTIC CAR SALES MODEL YEAR 1989

	1989	1988
Alliance	0	8,605
Eagle	0	2,911
Talon	2,106	0
Premier	46,476	29,878
Total Eagle	48,582	41,394
Horizon	45,341	57,007
Laser	14576	0
Sundance	90,637	81,857
Turismo	0	2,217
Reliant	51,481	118,050
Acclaim	69,243	0
Caravelle	1,556	19,586
Gran Fury	4,123	12,466
Total Plymouth	276,957	291,183
LeBaron K	2,000	28,550
LeBaron J	88,465	106,871
LeBaron GTS	5,930	18,694
Fifth Ave. (rwd)	15,126	49,547
Fifth Ave. (fwd)	2,653	0
New Yorker C	92,578	64,803
New Yorker E	406	21,572
Total Chrysler	207,158	290,037
Omni	45,933	53,908
Shadow	85,758	85,537
Charger	0	1,989
Daytona	68,032	70,986
Aries	53,309	105,539
Lancer	4,172	11,877
Spirit	57,664	0
Diplomat	6,392	19,968
Dynasty	112,407	58,248
Dodge 600	1,752	19,885
Total Dodge	435,419	427,937
CHRYSLER MTRS.	968,116	1,050,551
Escort	366,354	381,330
Mustang	172,218	170,601
Tempo	241,609	264,548
Taurus	360,237	367,327
Thunderbird	118,107	127,356
Probe	139,225	45,647
Crown Victoria	114,257	114,534
Total Ford Div.	1,512,007	1,471,343
Lynx/Tracer	62,693	60,845
Topaz	93,348	81,210
Sable	114,884	119,132
Cougar	97,246	109,124
Grand Marquis	117,186	115,302
Total Mercury	485,357	485,613
Continental	59,054	33,507
Lincoln	117,806	126,642
Mark VII	27,030	23,184
Total Lincoln	203,890	183,333
Total L-M Division	689,247	668,946
FORD MTR. CO.	2,201,254	2,140,289
Skyhawk	20,658	29,430
Somerset/Skylark	60,935	58,415
Century	142,078	122,230
Regal	91,312	119,234
LeSabre	148,407	137,154
Reatta	7,911	2,759
Electra	81,959	87,798
Riviera	20,020	9,241
Total Buick	573,280	566,261
Cimarron	976	6,925
Allante	3,066	3,502
Seville	23,583	21,661
DeVille	177,922	148,398
Brougham	37,643	49,400
Eldorado	32,410	29,514
Total Cadillac	275,600	259,400
Chevette	0	550
Prizm/Nova	73,096	98,154
Cavalier	306,518	301,809
Camaro	110,034	93,617
Celebrity	194,830	258,601
Corsica/Beretta	352,674	355,323
Monte Carlo	62,893	41,788
Caprice	171,435	165,573
Corvette	23,975	25,425
Total Chevrolet	1,295,455	1,340,840
Firenza	1,218	12,166
Calais	100,581	100,810
Cutlass Ciera	215,579	233,584
Cutlass Supreme	107,747	100,608
Olds 88	148,173	156,232
Olds 98	70,486	75,441
Toronado	9,343	15,623
Total Oldsmobile	653,127	694,464
Fiero	4,477	27,304
Pontiac 1000	0	365
Sunbird	97,447	77,865
Firebird	60,267	58,459
Grand Am	217,169	222,438
Pontiac 6000	77,556	103,003
Grand Prix	118,870	79,573
Bonneville H	94,761	109,862
Paris./Safari	4,875	7,388
Total Pontiac	675,422	686,257
GENERAL MTRS.	3,472,864	3,547,222
HONDA	391,109	360,035
Civic	173,001	100,825
Accord	218,108	259,210
MAZDA	40,867	24,707
MITSUBISHI	21,576	0
NISSAN	102,080	110,517
TOYOTA	178,460	60,076
VOLKSWAGEN	0	36,158
DOMESTIC TOTAL	7,376,346	7,329,556
IMPORT TOTAL	2,930,819	3,130,075
CAR IND. TOTAL	10,307,165	10,459,631

MARKET SHARES, SEPTEMBER 1989

	Total Sales	Pct. of Total
SUBCOMPACT	97,952	11.40
COMPACT	147,330	17.15
INTERMEDIATE	244,120	28.42
STANDARD	116,488	13.56
SPECIALITY	3,852	0.45
IMPORT	249,300	29.02
TOTAL	859,042	100.00

MARKET SHARES, MODEL YEAR 1989

	Total Sales	Pct. of Total
SUBCOMPACT	1,083,110	10.51
COMPACT	1,893,734	18.37
INTERMEDIATE	3,046,869	29.57
STANDARD	1,313,204	12.74
SPECIALITY	39,429	0.38
IMPORT	2,930,819	28.43
TOTAL	10,307,165	100.00

SALES

FROM PAGE 1

ing to Healy.

There was no ceiling on rebates, analysts said, noting that in the model year, the Big 3 spent $8 billion on incentives. It is estimated that GM spent about half of the total.

"Maybe they did spend too much in the third quarter," said Michael Luckey, Michael Luckey Consulting Group, Cresskill, N.J. "But the long-term objective is to maintain market share."

GM and Ford Motor Co. won bigger combined car and light-truck shares in the model year. GM's car and light-truck share rose from 35 percent to 35.6 percent, mainly due to truck sales gains. In the last two years, GM's truck share has risen five percentage points, according to GM President Robert Stempel.

Ford improved its car sales in 1989 and captured 24.6 percent of the car and light-truck market, compared with 24.1 percent in the 1988.

Ford's vehicle share gain was cemented again with the best-selling car and pickup truck. Escort was the top volume car for the fourth straight year with 366,354 sales, and for the eighth year, Ford's F-series full-size pickup took top honors as the leading volume vehicle with nearly 590,000 sales.

Chrysler Motors' car and light-

see SALES, page 47

IMPORT CAR SALES MODEL YEAR 1989

	1989	1988
Acura	140,713	127,435
Alfa Romeo	3,306	4,959
Audi	20,478	24,418
BMW	69,960	73,724
Chevrolet	113,524	128,038
Chrysler	7,562	10,154
Daihatsu	13,763	8,566
Dodge	39,570	52,796
Eagle	26,632	16,933
Ford	71,683	63,802
Honda	262,628	289,211
Hyundai	201,358	267,099
Isuzu	19,223	28,844
Jaguar	19,696	21,492
Lexus	4,554	0
Maserati	304	887
Mazda	221,476	232,112
Mercedes-Benz	76,152	86,024
Mercury	9,809	14,268
Mitsubishi	77,166	70,334
Nissan	407,082	389,102
Peugeot	6,372	7,536
Plymouth	36,140	47,195
Pontiac	59,236	54,671
Porsche	10,609	16,778
Saab	34,901	39,829
Sterling	5,951	10,882
Subaru	150,701	162,932
Suzuki	5,352	0
Toyota	561,911	627,122
Volkswagen	136,518	143,656
Volvo	102,625	93,620
Yugo	13,864	35,656
TOTAL	2,930,819	3,130,075

IMPORTED CAR SALES, YEAR TO DATE

	Sept. 1989	Sept. 1988	9 Mos., 1989	9 Mos., 1988
Acura	12,011	13,417	110,707	98,232
Alfa Romeo	305	230	2,493	3,663
Audi	2,182	1,734	15,870	18,335
BMW	4,401	6,024	49,887	53,286
Chevrolet	9,625	8,546	91,553	94,464
Chrysler	535	730	5,861	8,172
Daihatsu	1,501	1,021	10,869	8,566
Dodge	3,224	4,305	28,831	41,782
Eagle	1,917	1,935	19,752	12,435
Ford	6,225	5,768	55,982	53,466
Honda	16,843	22,079	185,427	187,921
Hyundai	13,602	17,194	146,042	208,966
Isuzu	845	2,478	14,563	19,860
Jaguar	1,482	1,832	13,882	14,913
Lexus	4,554	0	4,554	0
Maserati	20	59	220	649
Mazda	17,922	18,427	171,280	174,523
Mercedes-Benz	6,886	6,160	56,330	63,905
Mercury	314	1,634	6,320	11,772
Mitsubishi	11,060	6,687	62,364	55,273
Nissan	35,971	29,347	321,352	275,015
Peugeot	520	505	4,762	5,094
Plymouth	3,198	3,530	26,800	37,463
Pontiac	4,079	5,252	41,254	48,055
Porsche	656	1,071	7,333	12,460
Saab	2,627	2,983	26,270	29,859
Sterling	418	910	4,544	7,493
Subaru	10,064	14,710	111,175	116,420
Suzuki	618	0	4,618	0
Toyota	56,655	46,282	393,300	447,826
Volkswagen	10,025	12,703	104,657	112,000
Volvo	8,038	8,664	80,807	76,679
Yugo	977	2,510	8,325	26,106
TOTAL	249,300	248,727	2,187,984	2,322,555

LIGHT-DUTY TRUCK SALES, YEAR TO DATE

	Sept 1989	Sept 1988	9 Mos., 1989	9 Mos., 1988
Vans	13,536	14,771	133,037	143,787
Aerostar	13,945	14,879	150,607	142,500
Club Wagon	1,475	2,328	19,416	20,169
Ranger	23,710	27,253	213,924	239,167
Bronco	5,619	3,938	47,262	39,473
Bronco II	10,191	11,884	83,358	96,359
Pickups	44,085	42,747	447,650	442,047
Ford	**112,561**	**117,800**	**1,095,254**	**1,123,562**
Vans	11,676	6,688	95,903	97,354
Sportsvan	491	529	7,996	9,930
Geo Tracker	1,229	14	7,317	14
Astro	14,525	9,274	117,729	124,426
Lumina APV	0	0	68	0
S-10	26,942	19,959	182,188	189,090
S-10 Blazer	20,363	14,494	138,773	130,181
El Camino	0	0	0	420
Blazer	2,298	1,420	17,101	19,684
Suburban	6,653	3,682	50,273	48,756
Pickups	49,717	37,662	422,223	385,566
Chevrolet	**133,894**	**93,722**	**1,039,571**	**1,005,421**
Vans	3,962	3,877	55,263	44,816
Ram Wagon	1,708	2,214	19,331	19,732
Voyager	12,375	13,283	141,567	149,146
Caravan	13,929	14,564	153,843	160,975
Caravan C/V	898	1,205	11,120	15,429
Town & Country	292	0	850	0
Ram 50	2,601	3,985	22,934	44,278
Raider	1,183	652	6,945	5,103
Ramcharger	1,134	1,200	15,165	14,481
Dakota	7,360	7,151	68,435	73,158
Pickups	7,726	5,814	64,808	64,061
Chrysler	**53,168**	**53,945**	**560,261**	**591,179**
Vans	3,720	2,988	32,999	36,234
Safari	3,101	2,251	25,678	26,416
S-15	5,793	3,972	40,355	39,927
S-15 Jimmy	5,002	3,850	33,568	31,713
Jimmy	662	414	4,963	5,547
Caballero	0	0	0	60
Suburban	2,316	1,315	17,628	16,979
Pickups	14,724	9,855	119,917	107,308
P Model	449	456	2,968	3,370
W-4	118	111	984	1,157
GMC	**35,885**	**25,212**	**279,068**	**268,711**
Wrangler	4,065	3,451	40,799	31,087
Wagoneer	634	773	5,052	6,517
Cherokee	14,195	12,522	121,695	108,025
Grand Wagoneer	951	1,337	8,287	10,431
Comanche	1,843	3,131	19,826	30,398
J-10/J-20	0	0	0	221
Jeep	**21,688**	**21,214**	**195,659**	**186,679**
Toyota	17,459	21,664	174,015	191,883
Nissan	7,795	16,819	119,404	131,667
Mazda	6,652	8,344	62,774	75,014
Isuzu	8,649	8,718	72,918	65,169
Mitsubishi	2,693	3,323	29,962	33,466
Suzuki	2,368	761	19,787	50,517
Subaru	0	0	0	10
Range Rover	414	329	3,562	2,527
Imports	**46,030**	**59,958**	**482,422**	**558,253**
Industry Total	**403,226**	**371,851**	**3,652,227**	**3,725,745**

Compiled by Karen Detkowski

LIGHT-DUTY TRUCKS MODEL YEAR 1989

	1989	1988
Vans	176,961	187,591
Aerostar	192,685	177,039
Club Wagon	27,065	27,728
Ranger	273,336	303,666
Bronco	62,913	54,848
Bronco II	111,108	124,917
Pickups	589,772	588,452
Ford	**1,433,840**	**1,464,241**
Vans	120,240	129,148
Sportsvan	10,402	12,842
Geo Tracker	9,448	14
Astro	150,136	160,291
Lumina APV	68	0
S-10	241,866	235,452
S-10 Blazer	193,092	160,586
El Camino	0	2,567
Blazer	24,597	28,540
Suburban	68,414	64,845
Pickups	552,294	489,882
Chevrolet	**1,370,557**	**1,284,167**
Vans	69,788	56,634
Ram Wagon	25,292	26,642
Voyager	184,694	187,715
Caravan	203,786	205,223
Caravan C/V	14,913	19,019
Town & Country	968	0
Ram 50	31,939	56,342
Raider	9,703	9,382
Ramcharger	19,993	19,955
Dakota	88,673	91,850
Pickups	82,642	88,666
Chrysler	**732,391**	**761,428**
Vans	42,014	46,396
Safari	32,430	34,785
S-15	53,003	49,939
S-15 Jimmy	46,388	41,768
Jimmy	7,036	8,179
Caballero	0	325
Suburban	23,393	22,224
Pickups	153,938	137,003
P Model	3,743	4,919
W-4	1,403	1,549
GMC	**363,348**	**347,087**
Wrangler	51,788	39,962
Wagoneer	7,673	9,397
Cherokee	163,236	141,279
Grand Wagoneer	12,338	14,779
Comanche	27,399	39,224
J-10/J-20	0	454
Jeep	**262,434**	**245,095**
Toyota	229,209	257,643
Nissan	157,347	181,122
Mazda	81,047	98,012
Isuzu	98,154	82,633
Mitsubishi	40,028	46,858
Suzuki	26,334	66,607
Subaru	0	81
Range Rover	4,462	3,564
Imports	**636,581**	**736,520**
Industry Total	**4,799,151**	**4,838,538**

Compiled by Karen Detkowski

SALES

For the eighth year, Ford's F-series pickup was the best selling vehicle.

SALES

FROM PAGE 46

truck share fell from 14.3 percent to 13.7 percent. Nearly 48 percent of Chrysler's sales were trucks, compared with 46.08 percent in 1988.

Except for Mazda, Japanese companies with transplant operations reported car sales gains and better market shares in 1989. But Toyota, Mazda and Nissan also reported light-truck sales losses in 1989.

Toyota was the volume leader among Japanese vehicle makers in 1989. Its car and light-truck share rose to 6.4 percent, up from 6.2 percent in 1988.

Nissan and Honda continued to outpace their 1988 sales totals. Nissan had 4.4 percent of the car and light-truck market, compared with 4.3 percent last year. Honda's share rose to 4.3 percent, up from 4.2 percent.

Mazda sold fewer cars and trucks in 1989. Its share declined from 2.3 percent to 2.2 percent.

Other foreign car and light-truck makers sold 10.71 percent fewer vehicles. Their vehicle share declined to 8.8 percent from 9.6 percent in 1988.

TOP 10 NAMEPLATES, MODEL YEAR 1989

Car	Units
1. Escort	366,354
2. Accord	362,435
3. Taurus	360,237
4. Corsica/Beretta	352,674
5. Cavalier	306,518
6. Camry	264,598
7. Tempo	241,609
8. Civic	238,967
9. Grand Am	217,169
10. Cutlass Ciera	215,579

It was a good year for U.S. light-truck manufacturers — particularly GM — and an anemic one for foreign-based light-duty truck producers.

GM's penetration jumped to 28.56 percent from 26.54 percent in 1988. It still trailed industry leader Ford, though, whose share slipped to 29.88 percent from 30.26 percent in 1988.

Chrysler's share, as represented by Dodge and Plymouth truck models, dropped to 15.26 percent from 15.74 percent in 1988.

GMC's share climbed to 7.57 percent from 7.17 percent, and Jeep's to 5.47 percent from 5.07 percent in 1988.

Foreign-based manufacturers' share dropped to 13.26 percent from 15.22 percent in 1988.

As a result of expensive rebates put in effect from mid-July, third-quarter car and light-truck sales rose 4.06 percent above the same period in 1988. There were 3,933,653 cars and trucks sold, compared with 3,780,181 in the third quarter of 1988. But third-quarter sales lagged behind the second quarter of 1989 by 2.71 percent.

Despite adversities like Hurricane Hugo hitting dealers in North and South Carolina, September car and light-truck sales rose 5.44 percent from last year.

U.S.-built and import-car sales climbed 4.09 percent ahead of September 1988.

Bouyed by a 6.13 percent increase in the final 10 days of September, the eight U.S. carmakers sold 5.75 percent more cars this year. GM, Ford, Mazda and Toyota reported higher U.S.-built car deliveries.

In September, U.S. light-duty truck sales, bolstered by special incentives, set a monthly record. Some 403,226 trucks were retailed last month, up 8.44 percent from 371,851 in like 1988.

Chevrolet's September light-truck sales rose 42.84 percent over year-ago sales, and Ford's light-duty sales declined 4.45 percent. GMC had posted a gain of 42.33 percent.

Imports continued their decline. Their sales dropped 23.23 percent from a year ago.

U.S. CAR SALES BY MARKETING UNITS, YEAR TO DATE

	Sept. 1989	Percent Share	Sept. 1988	Percent Share	9 Mos., 1989	Percent Share	9 Mos., 1988	Percent Share
Alfa Romeo	305	0.04	230	0.03	2,493	0.03	3,663	0.05
American Honda	58,335	6.79	65,893	7.98	589,502	7.55	564,037	6.97
BMW	4,401	0.51	6,024	0.73	49,887	0.64	53,286	0.66
Buick	55,190	6.42	51,542	6.25	432,981	5.55	441,125	5.45
Cadillac	27,773	3.23	22,412	2.72	204,698	2.62	195,646	2.42
Chevrolet	111,396	12.97	94,687	11.47	1,087,919	13.93	1,158,556	14.32
Chrysler	14,935	1.74	19,309	2.34	156,240	2.00	220,647	2.73
Daihatsu	1,501	0.17	1,021	0.12	10,869	0.14	8,566	0.11
Dodge	34,673	4.04	37,761	4.58	353,155	4.52	386,474	4.78
Eagle	6,652	0.77	6,478	0.78	57,148	0.73	47,931	0.59
Ford	121,226	14.11	118,169	14.32	1,203,430	15.41	1,216,412	15.03
Hyundai	13,602	1.58	17,194	2.08	146,042	1.87	208,966	2.58
Isuzu	845	0.10	2,478	0.30	14,563	0.19	19,860	0.25
Jaguar	1,482	0.17	1,832	0.22	13,882	0.18	14,913	0.18
Lexus	4,554	0.53	0	0.00	4,554	0.06	0	0.00
Lincoln	13,927	1.62	16,472	2.00	152,277	1.95	140,011	1.73
Maserati	20	0.00	59	0.01	220	0.00	649	0.01
Mazda	20,746	2.42	21,207	2.57	203,856	2.61	197,563	2.44
Mercedes	6,886	0.80	6,160	0.75	56,330	0.72	63,905	0.79
Mercury	39,812	4.63	37,732	4.57	388,412	4.97	394,715	4.88
Mitsubishi	14,867	1.73	6,687	0.81	83,940	1.08	55,273	0.68
Nissan	43,040	5.01	47,393	5.74	403,265	5.17	366,973	4.54
Oldsmobile	65,593	7.64	60,142	7.29	493,665	6.32	555,808	6.87
Peugeot	520	0.06	505	0.06	4,762	0.06	5,094	0.06
Plymouth	28,822	3.36	25,095	3.04	239,307	3.07	264,072	3.26
Pontiac	58,916	6.86	61,037	7.40	545,683	6.99	590,181	7.29
Porsche	656	0.08	1,071	0.13	7,333	0.09	12,460	0.15
Saab	2,627	0.31	2,983	0.36	26,270	0.34	29,859	0.37
Sterling	418	0.05	910	0.11	4,544	0.06	7,493	0.09
Subaru	10,064	1.17	14,710	1.78	111,175	1.42	116,420	1.44
Suzuki	618	0.07	0	0.00	4,618	0.06	0	0.00
Toyota	73,417	8.55	52,458	6.36	544,656	6.98	493,078	6.09
Volvo	8,038	0.94	8,664	1.05	80,807	1.04	76,679	0.95
VWoA	12,207	1.42	14,437	1.75	120,527	1.54	155,274	1.92
Yugo	977	0.11	2,510	0.30	8,325	0.11	26,006	0.32
TOTAL	859,042	100.00	825,262	100.00	7,807,335	100.00	8,091,595	100.00
TOTAL GM	318,868	37.12	289,820	35.12	2,764,946	35.41	2,941,316	36.36
TOTAL FORD	174,965	20.37	172,373	20.89	1,744,119	22.34	1,751,138	21.64
TOTAL CHRYSLER	85,063	9.90	88,643	10.74	805,850	10.32	919,124	11.36
TOTAL JAPANESE	227,987	26.54	211,847	25.67	1,970,998	25.25	1,821,770	22.51
TOTAL EUROPEAN	38,537	4.49	45,385	5.50	375,380	4.81	449,281	5.55
TOTAL KOREAN	13,602	1.58	17,194	2.08	146,042	1.87	208,966	2.58

Big 3 totals include their captive imports. Percent share may contain error of one or two points due to rounding.
Sales charts compiled by Karen Detkowski

U.S. CAR SALES BY MARKETING UNITS MODEL YEAR 1989

	1989	1988
Alfa Romeo	3,306	4,959
American Honda	794,450	776,681
BMW	69,960	73,724
Buick	573,280	566,251
Cadillac	275,600	259,400
Chevrolet	1,408,979	1,468,878
Chrysler	214,720	300,191
Daihatsu	13,763	8,566
Dodge	474,989	480,733
Eagle	75,214	58,327
Ford	1,583,689	1,535,145
Hyundai	201,358	267,099
Isuzu	19,223	28,844
Jaguar	19,696	21,492
Lexus	4,554	0
Lincoln	203,890	183,333
Maserati	304	887
Mazda	262,343	256,823
Mercedes	76,152	86,024
Mercury	495,136	499,881
Mitsubishi	98,742	70,334
Nissan	509,162	479,619
Oldsmobile	653,127	694,464
Peugeot	6,372	7,536
Plymouth	313,097	338,378
Pontiac	734,658	740,928
Porsche	10,609	16,778
Saab	34,901	39,829
Sterling	5,951	10,882
Subaru	150,701	162,932
Suzuki	5,352	0
Toyota	740,371	687,198
Volvo	102,625	93,620
VWoA	156,996	204,233
Yugo	13,895	35,652
TOTAL	10,307,165	10,459,631
TOTAL GM	3,645,644	3,729,931
TOTAL FORD	2,282,715	2,218,359
TOTAL CHRYSLER	1,078,020	1,177,629
TOTAL JAPANESE	2,598,861	2,470,997
TOTAL EUROPEAN	900,767	595,616
TOTAL KOREAN	261,358	267,099

Big 3 totals include their captive imports. Percent share may contain error of one or two points due to rounding.
Sales charts compiled by Karen Detkowski

PRODUCTION

Truck output for quarter is 3-year low

By Kathy Boyer
AUTOMOTIVE NEWS STAFF REPORTER

Third-quarter truck production of 887,175 was the lowest for that quarter since 1986 when 867,031 were built.

Last quarter's truck output was 5.06 percent less than the year-ago quarter's 934,439.

September's truck production of 309,388 was the lowest for that month since 1985 when 292,066 units were completed. Last month's output was 12.35 percent below August's 353,000 and 14.05 percent below the year-ago month's 359,981.

Last week's targeted truck production of 63,409 dipped 20.40 percent from the prior week's 79,658 and slipped 23.34 percent from the year-ago week's 82,712.

Car production in the third quarter totaled 1,393,099 units, 6.55 percent below the year-ago quarter's 1,490,730.

Last month's car output of 575,698 increased 7.14 percent over the August build of 537,308 but was 7.61 percent less than the year-ago month's 623,100.

Automakers scheduled 131,879 cars last week, 12.79 percent below the prior week's 151,228 and 13.20 percent lower than the year-ago week's 151,932.

Last week's scheduled production was split as follows: General Motors, 44.95 percent; Ford Motor Co., 25.34 percent; Chrysler Motors, 11.79 percent; Honda of America Manufacturing, 4.66 percent; Mazda Motor Manufacturing (U.S.A.) Corp., 3.40 percent; Toyota Motor Manufacturing U.S.A., 3.07 percent; New United Motor Manufacturing Inc., 2.73 percent; Diamond-Star Motors, 2.37 percent; and Nissan Motor Manufacturing Corp. U.S.A., 1.69 percent.

GM's Wilmington, Del.; Linden, N.J.; Moraine, Ohio; Pontiac, Mich.; and Shreveport, La., plants remain idle due to slow sales.

Ford's Cougar/Thunderbird line in Lorain, Ohio, will be down until Oct. 16 due to sluggish sales.

Chrysler's Warren, Mich., plant will be closed until Oct. 16 because of high inventory.

Canada notches quarterly gains

Canadian automakers built 202,015 cars in the third quarter, 8.77 percent above the year-ago quarter's 185,721. September output of 83,324 cars was 23.66 percent more than August's 67,382 and 0.86 percent above the year-ago month's 82,611.

Truck output totaled 190,708 units during the three-month span, 18.65 percent more than the year-ago quarter's 160,735. Last month's truck output of 81,900 dipped 4.37 percent from the year-ago month's 85,640.

Ford Motor Co.'s Oakville, Ontario, plant was idle last week due to slow sales. The plant was expected to resume output today.

Chrysler Motors closed its Brampton, Ontario, plant last week to balance inventory. It is slated to reopen Oct. 16.

U.S. CAR	Week Ended Oct. 7, 1989	Week Ended Oct. 8, 1988	Week Ended Sept. 30, 1989	Sept. Total	Jan. 1 to Oct. 7, 1989	Jan. 1 to Oct. 8, 1988
Horizon	1,000	1,558	1,019	2,039	23,906	62,851
Sundance	1,900	2,247	1,959	7,996	80,175	79,391
Reliant	0	2,234	0	0	0	68,759
Acclaim	2,600	0	2,884	11,772	97,159	0
Caravelle	0	0	0	0	0	9,265
Gran Fury	0	187	0	0	0	17,009
Total Plymouth	5,500	6,226	5,862	21,807	201,240	237,275
LeBaron K	0	0	0	0	0	7,912
LeBaron J	0	2,163	2,734	10,963	80,293	60,687
LeBaron GTS	0	240	0	0	2,946	7,262
N. Yorker C-Class	750	2,192	893	3,418	65,334	81,077
Fifth Avenue	1,300	974	1,977	7,662	17,302	24,090
Imperial	100	0	180	212	312	0
Total Chrysler	2,150	5,569	5,784	22,255	166,187	181,028
Omni	1,100	1,542	1,126	2,245	25,311	61,671
Daytona	0	1,524	1,846	7,329	63,229	59,211
Shadow	2,100	2,154	2,138	8,039	77,404	78,664
Aries	0	2,172	0	0	0	67,273
Dodge 600	0	0	0	0	0	8,549
Dynasty	2,000	2,554	1,790	7,881	102,057	82,267
Lancer	0	149	0	0	1,528	7,038
Spirit	2,700	0	3,547	13,535	84,405	0
Diplomat	0	380	0	0	0	15,382
Total Dodge	7,900	10,475	10,447	39,029	353,934	38,055
CHRYSLER MOTORS	15,550	22,270	22,093	83,091	721,361	798,358
Escort	9,694	10,812	9,273	34,485	262,477	310,573
Mustang	3,685	4,410	3,385	8,897	157,200	157,539
Tempo	3,067	3,837	2,929	11,934	115,230	142,867
Taurus	7,915	7,793	7,784	24,193	276,586	306,221
Thunderbird	0	0	3,278	11,706	115,889	90,935
Total Ford Div.	24,361	26,852	26,649	91,215	927,382	1,008,135
Topaz	1,333	1,660	1,361	5,537	54,058	54,618
Cougar	0	0	2,186	8,678	98,569	70,348
Sable	2,837	2,765	2,864	9,549	91,185	104,050
Total Mercury	4,170	4,425	6,411	23,764	243,812	229,016
Continental	1,468	1,135	1,159	4,014	49,093	38,339
Mark VII	486	557	384	1,322	15,864	20,268
Lincoln	2,930	1,696	2,317	8,005	93,282	97,651
Total Lincoln	4,884	3,388	3,860	13,341	158,239	156,258
Total L-M Division	9,054	7,813	10,271	37,105	402,051	385,274
FORD MOTOR CO.	33,415	34,665	36,920	128,320	1,329,433	1,393,409
Skyhawk	0	1,041	0	0	6,913	14,538
Skylark/Somerset	1,920	0	1,758	6,953	47,908	37,452
Century	2,693	4,828	2,839	11,339	101,850	99,915
Riviera	538	550	528	1,793	14,869	6,620
Electra	1,668	2,379	1,734	8,390	61,781	65,153
LeSabre (fwd)	3,281	2,925	3,273	12,852	117,472	104,489
LeSabre (rwd)	228	176	193	808	5,600	7,675
Reatta	202	231	195	814	4,592	7,546
Total Buick	10,530	12,130	10,520	42,949	360,985	343,388
Cimarron	0	0	0	0	0	3,693
Eldorado	601	647	635	1,966	22,625	27,294
Seville	394	509	455	1,343	16,613	17,380
Brougham (rwd)	1,570	887	0	16,480	42,358	26,177
Deville (fwd)	3,950	3,792	4,064	4,274	141,654	116,242
Allante	75	75	75	240	2,392	1,459
Total Cadillac	6,590	5,910	5,229	24,303	225,642	192,245
Cavalier	8,119	7,654	9,020	27,638	278,495	279,693
Camaro	2,280	2,947	2,214	8,352	79,653	71,503
Celebrity	0	3,264	0	0	70,720	141,392
Corsica/Beretta	4,320	10,116	9,130	35,995	298,180	330,477
Caprice	1,333	4,117	1,334	11,077	137,706	161,859
Corvette	0	562	580	2,240	19,336	17,365
Total Chevrolet	16,052	28,660	22,278	85,302	884,090	1,002,289
Calais	1,680	0	1,843	7,481	70,093	87,167
Firenza	0	0	0	0	0	5,230
Cutlass Ciera	1,628	1,511	1,325	5,335	68,102	21,823
Cutlass Supreme	4,043	3,567	4,033	15,660	83,557	108,630
Toronado	538	277	452	1,568	7,099	11,870
88 (fwd)	3,889	3,803	3,977	13,046	107,175	121,212
88 (rwd)	295	170	0	469	6,100	9,019
Olds 98	1,250	1,650	1,274	5,490	55,757	56,127
Total Oldsmobile	13,323	10,978	12,904	49,049	397,883	421,078
Sunbird	3,265	2,711	3,693	12,348	111,902	83,186
Grand Am	4,800	6,001	4,850	19,259	185,534	184,764
Firebird	1,170	1,739	1,115	4,832	44,323	49,071
Grand Prix	0	4,000	4,067	15,473	99,335	106,237
Pontiac 6000	1,465	2,874	1,621	6,466	64,032	68,015
Bonneville	2,082	3,506	2,047	9,236	73,180	90,579
Safari/Parisienne	0	98	0	0	2,691	6,238
Fiero	0	0	0	0	0	13,297
Total Pontiac	12,782	20,929	17,393	67,614	580,997	601,387
GENERAL MOTORS	59,277	78,607	68,324	269,217	2,449,597	2,560,387
DIAMOND-STAR	3,120	0	2,599	12,125	58,965	0
HONDA	6,150	7,730	6,474	27,025	285,044	284,890
Civic	3,561	2,436	3,688	13,658	103,504	83,049
Accord	2,589	5,294	2,786	13,367	181,540	201,841
MAZDA†	4,485	5,503	4,640	17,850	157,617	107,911
NISSAN	2,232	2,876	2,612	10,475	91,628	87,344
NUMMI	3,600	281	3,793	13,523	154,497	111,577
Corolla	1,400	281	1,580	5,329	62,381	42,288
Geo Prizm/Nova	2,200	0	2,213	8,194	92,116	69,289
TOYOTA	4,050	0	3,773	14,072	107,497	0
VOLKSWAGEN	0	0	0	0	0	35,997
Golf/GTI	0	0	0	0	0	30,444
Jetta	0	0	0	0	0	5,553
Total Cars, U.S.	131,879	151,932	151,228	575,698	5,355,639	5,379,873
Total Cars, Canada	18,327	20,471	23,090	83,324	742,372	821,978
U.S., Canada Cars	150,206	172,403	174,318	659,022	6,098,011	6,201,851
U.S., Canada Cars and Trucks	231,155	273,734	274,639	1,050,310	10,078,647	10,093,381

Monthly estimates may contain errors of one or two units due to rounding.
†—Total includes the MX-6 and Ford Probe

CANADIAN CAR	Week Ended Oct. 7, 1989	Week Ended Oct. 8, 1988	Week Ended Sept. 30, 1989	Sept. Total	Jan. 1 to Oct. 7, 1989	Jan. 1 to Oct. 8, 1988
Premier	1,020	1,016	514	1,789	28,269	46,375
CHRYSLER MOTORS	1,020	1,016	514	1,789	28,269	46,375
Tempo	0	3,283	3,345	12,915	100,084	135,190
Topaz	0	1,636	1,415	5,525	42,542	52,093
Crown Victoria	2,376	2,791	2,233	8,442	91,174	98,917
Grand Marquis	2,520	2,932	2,603	9,671	98,412	100,321
FORD MOTOR CO.	4,896	10,642	9,596	36,553	332,212	386,521
Celebrity	537	569	436	1,342	17,116	15,870
Cutlass Ciera	984	2,951	836	2,299	98,233	180,731
Lumina	5,790	0	6,150	20,288	122,009	0
Pontiac 6000	0	0	0	0	0	29,690
Regal	2,370	3,967	2,894	11,592	62,128	124,437
GENERAL MOTORS	9,681	7,487	10,316	35,521	299,486	350,728
HONDA	2,000	1,146	1,942	7,108	64,204	33,916
TOYOTA	550	0	542	1,710	12,011	0
VOLVO	180	180	180	643	6,190	4,438
Total Cars, Canada	18,327	20,471	23,090	83,324	742,372	821,978

U.S. TRUCK☆	Week Ended Oct. 7, 1989	Week Ended Oct. 8, 1988	Week Ended Sept. 30, 1989	Sept. Total	Jan. 1 to Oct. 7, 1989	Jan. 1 to Oct. 8, 1988
Caravan	2,300	783	2,500	9,694	81,869	74,788
Dakota	0	2,381	2,252	8,759	74,226	82,865
Caravan C/V	50	90	102	410	5,295	10,272
Ram pickups	0	2,372	2,251	8,826	74,290	61,378
Total Dodge	2,350	5,626	7,105	27,689	235,680	229,303
Cherokee	4,000	4,519	4,088	16,799	170,661	141,118
Comanche	500	872	498	1,937	22,365	34,827
Grand Wagoneer	0	350	325	585	8,127	10,493
Wagoneer	100	277	164	545	6,242	8,418
Total Jeep	4,600	6,018	5,075	19,866	207,395	194,856
Voyager	2,300	708	2,274	8,614	76,528	69,603
Town & Country	50	0	128	594	2,911	0
Total C-P Div.	2,350	708	2,402	9,208	79,439	68,966
CHRYSLER MOTORS	9,300	12,352	14,582	56,763	522,514	490,216
Aerostar	4,026	4,939	4,323	16,422	174,066	160,097
Bronco	1,198	907	1,163	3,522	57,211	42,124
Bronco II	2,403	454	2,247	6,885	91,341	95,146
Econoline	4,204	5,549	4,210	12,079	173,538	184,648
Mediums/Heavies	0	1,309	1,292	3,841	46,047	51,064
Light trucks	10,606	10,033	9,357	36,945	406,371	379,029
Ranger	5,214	2,903	6,460	21,462	241,973	260,789
Total Ford Div.	27,651	26,094	29,052	101,156	1,188,547	1,172,897
FORD MOTOR CO.	27,651	26,094	29,052	101,156	1,188,547	1,172,897
Astro	2,928	4,001	3,311	12,658	127,054	136,560
Blazer	407	550	446	2,065	21,907	20,412
Mediums/Heavies	277	321	196	830	5,119	15,540
P-Model	0	911	0	2,198	23,656	31,999
Pickups	7,389	9,523	7,147	30,286	313,912	275,883
S-10	370	6,218	3,532	16,552	196,052	235,282
S-10 Blazer	0	4,319	2,045	11,718	142,853	129,436
Sportsvan/Van	1,787	2,148	1,564	6,495	75,126	74,303
Suburban	968	1,976	1,145	5,421	60,550	54,106
Total Chevrolet	14,126	29,967	19,386	88,223	966,229	973,521
Jimmy	296	279	262	748	6,925	5,805
Mediums/Heavies	483	569	502	2,052	9,133	28,725
P-Model	0	111	0	203	3,202	4,268
Pickups	2,151	2,399	2,715	9,432	35,393	84,944
S-15	0	1,350	2,524	6,536	48,568	53,658
S-15 Jimmy	0	1,172	495	4,147	40,937	36,548
Safari	832	1,126	1,130	4,283	34,159	34,867
Suburban	1,137	509	971	3,007	25,881	24,212
Vandura/Rally Vans	673	742	881	2,704	22,856	26,615
Total GMC	5,572	8,257	9,480	33,112	287,054	299,642
GENERAL MOTORS	19,698	38,224	28,866	121,335	1,253,283	1,273,163
NAVISTAR	1,370	1,909	1,379	6,066	62,591	66,629
NISSAN	1,940	1,383	2,329	9,578	93,188	72,217
AM GENERAL	450	450	450	1,890	17,640	17,910
MISCELLANEOUS	3,000	2,300	3,000	12,600	111,600	91,540
Total Trucks, U.S.	63,409	82,712	79,658	309,388	3,249,363	3,184,572

CANADIAN TRUCK	Week Ended Oct. 7, 1989	Week Ended Oct. 8, 1988	Week Ended Sept. 30, 1989	Sept. Total	Jan. 1 to Oct. 7, 1989	Jan. 1 to Oct. 8, 1988
Caravan	2,740	2,497	3,462	13,734	111,865	108,146
Caravan C/V	110	189	104	627	8,467	9,711
Ram Wagon	500	615	507	2,113	20,344	19,716
Ram Van	1,850	1,746	1,943	7,553	55,642	53,475
Total Dodge	5,200	5,047	6,016	24,027	196,318	191,048
Voyager	2,270	2,482	2,736	10,503	96,792	97,493
Total Plymouth	2,270	2,482	2,736	10,503	96,792	97,493
Wrangler	0	889	1,700	7,109	62,273	38,889
Total Jeep	0	889	1,700	7,109	62,273	38,889
CHRYSLER MOTORS	7,470	8,418	10,452	41,639	355,383	327,430
FORD MTR. (lt. trks.)	3,040	3,584	3,062	11,605	120,796	124,617
Light trucks	3,370	2,816	3,233	13,871	123,713	118,745
Vans	1,405	1,385	1,312	5,162	45,550	45,159
Total Chevrolet	4,775	4,201	4,545	19,033	169,263	163,904
Light trucks	1,510	1,612	1,959	6,858	55,678	59,060
Vans	545	530	443	1,931	21,321	23,056
Total GMC	2,055	2,142	2,402	8,789	76,999	82,116
GENERAL MOTORS	6,830	6,343	6,947	27,822	246,262	246,020
NAVISTAR	200	274	202	834	8,832	8,891
Total Trks., Canada	17,540	18,619	20,663	81,900	731,273	706,958
U.S., Canada Trks.	80,949	101,331	100,321	391,288	3,980,636	3,891,530

☆—Includes window van production *—Estimated
Jeep includes commercial only. AM General includes government-destined vehicles.
Miscellaneous includes estimates for Mack, Volvo-White, Kenworth, Peterbilt, Freightliner, Mercedes-Benz, etc.
Monthly estimates may contain errors of one or two units due to rounding.